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ABSTRACT

These proceedings consist of seven papers and four reaction papers that were presented at a conference designed for administrative and management personnel from agencies and programs providing education and rehabilitation services to blind persons. Included in the volume are the following papers: "Introduction to Rehabilitation Research," by William H. Graves; "Predicting Employment Outcomes of Blind Clients of State Vocational Rehabilitation Agencies," by J. Martin Giesen; "Productivity and Comfort of the Visually Impaired Worker as a Function of Low-Vision Aid Usage and Illumination Level and Color Contrast Modifications," by Shelly Miles; "The Low-Vision Clinic as an Employment Enhancement Technique," by Connie McCaa; "The Career Development of Blind and Visually Impaired Persons and Career Development Service Resources," by William H. Graves; "Funding Technological Advances," by Mary Ann Langton; and "The Future of Rehabilitation Research in Blindness and Low Vision," by William H. Graves. Reactions to four of these papers were provided by the following individuals: J. Elton Moore, Randy Parker, Kenneth F. House, and Susan Jay Spungin. (MN)

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Rehabilitation Research & Training Center in Blindness & Low Vision

Mississippi State University

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MAXIMIZING EMPLOYMENT THROUGH RESEARCH
PROCEEDINGS OF THE FIRST ANNUAL RESEARCH UTILIZATION CONFERENCE

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REHABILITATION RESEARCH AND TRAINING CENTER
IN BLINDNESS AND LOW VISION

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The Research and Training Center would like to comment about the presentors and participants, who made the First Annual Research Utilization Conference such a success. Special appreciation goes to the American Foundation for the Blind and Mississippi Vocational Rehabilitation for the Blind for their continued support of Center programs such as this.

INTRODUCTION

Increasingly researchers are concerned about what happens to their research products. They are concerned not only with how the research products are used but also with the extent to which they are used. In an effort to promote the overall utilization and facilitate appropriate use of its research products the Mississippi State University Rehabilitation Research and Training Center on Blindness and Low Vision sponsors an Annual Research Utilization Conference.

This conference is designed for administrative and management personnel from the education and rehabilitation components of the blindness field. The conference is planned around four research presentations, highlighting research conducted by the Center. A previously designated panel member then reacts to each research presentation. This panel reaction is intended to be a catalyst for discussion of issues raised in the context of the research presentation. Additionally individual presentations are made on topics of interest to administrative and management personnel. The intent is to provide the individuals attending the conference with information that will enhance their ability to use the research that is presented as well as research they may encounter in the future.

This publication represents the main thrust of the formal proceedings. Unfortunately it is not possible to communicate the many fruitful discussions that emerged during the conference. The research summaries contained in this document are essentially the same as those provided to the conference participants. To these summaries have been

ADDED COMMENTS MADE BY THE PANEL MEMBERS. THREE ADDITIONAL PAPERS ARE ALSO INCLUDED: TWO FOCUS ON REHABILITATION RESEARCH, WHILE THE THIRD DEALS WITH FUNDING SOURCES FOR TECHNOLOGY. EVEN THOUGH READING A CONFERENCE PROCEEDING IS NOT AN ADEQUATE SUBSTITUTE FOR ATTENDING THE CONFERENCE, THE INFORMATION THAT CAN BE COMMUNICATED THIS WAY MAY BE OF INTEREST TO THOSE INDIVIDUALS WHO WERE UNABLE TO ATTEND.

EACH PRESENTOR CONTRIBUTED GREATLY TO THE SUCCESS OF THE CONFERENCE. BY PUBLISHING THEIR WORK IN THIS WAY THEIR CONTRIBUTION WILL BE EVEN MORE LASTING.

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INTRODUCTION TO REHABILITATION RESEARCH

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THE FIELD OF BLINDNESS HAS EXPERIENCED CONSIDERABLE PROGRESS IN THE LAST HALF-CENTURY. MUCH OF THIS PROGRESS MAY BE ATTRIBUTED TO RESEARCH. THROUGH RESEARCH, NEW TECHNOLOGICAL AIDS AND DEVICES HAVE BEEN DEVELOPED; INSTRUCTIONAL MATERIALS AND PROCEDURES HAVE BEEN CREATED FOR USE IN THE FIELD; AND LIFE ITSELF HAS BEEN EXTENDED FOR BLIND PERSONS WHOSE BLINDNESS RESULTS FROM DISEASES SUCH AS DIABETES. RESEARCH TO MANY PEOPLE, INCLUDING THOSE IN THE VISUAL DISABILITY FIELD, MAY BE FAR TOO NARROWLY DEFINED AND TOO EXCLUSIVELY ASSOCIATED WITH EXPERIMENTATION AS CONDUCTED IN THE PHYSICAL, BIOLOGICAL OR MEDICAL SCIENCES. TOO OFTEN, RESEARCH HAS BEEN PERCEIVED ALMOST EXCLUSIVELY IN THE CONTEXT OF THE DISCOVERY OF A NEW DRUG OR THE INVENTION OF NEW TECHNOLOGY.

"RESEARCH IS BEST CONCEIVED AS THE PROCESS OF ARRIVING AT DEPENDABLE SOLUTIONS TO PROBLEMS THROUGH THE PLANNED AND SYSTEMATIC COLLECTION, ANALYSIS, AND INTERPRETATION OF DATA" (NOULY, 1970, P. 12). IT IS AN IMPORTANT TOOL FOR ADVANCING KNOWLEDGE, FOR PROMOTING PROGRESS, AND FOR ENABLING HUMAN BEINGS TO RELATE MORE EFFECTIVELY TO THE ENVIRONMENT, TO ACHIEVE GOALS, AND TO SOLVE PROBLEMS (NOULY, 1970).

RESEARCH IS ORIENTED TOWARD THE DISCOVERY OF FUNCTIONAL RELATIONSHIPS EXISTING AMONG THE PHENOMENA OF THE WORLD IN WHICH BLIND AND VISUALLY IMPAIRED PEOPLE, EDUCATORS, AND REHABILITATION COUNSELORS LIVE. RESEARCHERS ASSUME THAT RELATIONSHIPS EXIST BETWEEN CERTAIN ANTECEDENT OR PRIOR EVENTS AND CERTAIN CONSEQUENTS SO THAT UNDER CERTAIN CONDITIONS, A CERTAIN CONSEQUENT WILL LIKELY FOLLOW A CERTAIN PRIOR EVENT. REHABILITATION RESEARCHERS, LIKE OTHER RESEARCHERS, ATTEMPT TO DETERMINE THE PARAMETERS OF THESE RELATIONSHIPS. WHEN THERE ARE CHANGES IN THESE CERTAIN EVENTS, THERE MAY BE CHANGES IN THE

RELATIONSHIP BETWEEN THE ANTECEDENT AND CONSEQUENT EVENTS. THESE CHANGES FRUSTRATE THE CONSUMER OF RESEARCH FOR THE RESEARCHER CAN NOT GIVE UNEQUIVOCAL ANSWERS. THE RESEARCHER MUST ALWAYS QUALIFY, LIMIT, AND ISSUE STATEMENTS REPLETE WITH WORDS SUCH AS IF, WHEN, MAY, HOWEVER, AND BUT IN SUCH CASES.

RESEARCH IS A CONCEPT WHICH DESCRIBES ACTIVITIES THAT ARE "SYSTEMATIC AND DETAILED, DESIGNED TO DISCOVER NEW KNOWLEDGE, OR TO CONFIRM OR DISPROVE ASSUMPTIONS REGARDING WHAT WE HOLD TO BE TRUE" (COOK, 1979, P. 89). ON THE OTHER HAND, RESEARCH IS NOT A BELIEF OR A STATEMENT OF FAITH. IT MAY, HOWEVER, BE AN OPINION THAT IS, HOPEFULLY, HELD WITHOUT EMOTIONAL ATTITUDES AND IS OPEN TO EVALUATION (COOK, 1979). COOK (1979) ARGUES THAT THE BEST WAY TO THINK OF RESEARCH IS AS "...THE OPINION OF THE INVESTIGATOR, DOCUMENTED BY FACTS PRESENTED ACCORDING TO CERTAIN RULES, AND OPEN TO PUBLIC CONFIRMATION OR REFUTATION" (P. 89). THE PURPOSE OF THIS RESEARCH UTILIZATION CONFERENCE IS TO INFORM YOU OF OUR OPINIONS, DOCUMENTED BY FACTS, ABOUT CERTAIN ASPECTS OF THE CAREER DEVELOPMENT OF BLIND AND VISUALLY IMPAIRED PERSONS, AND TO GIVE YOU AN OPPORTUNITY TO CONSIDER OUR FINDINGS AND THESE IMPLICATIONS FOR YOUR PRACTICE.

WHILE RESEARCH IN GENERAL IS AN ACTIVITY TO DISCOVER NEW KNOWLEDGE, TO CHECK OUR ASSUMPTIONS, AND TO SOLVE PROBLEMS, REHABILITATION RESEARCH HAS A MORE SPECIFIC FOCUS. "REHABILITATION RESEARCH IS A DISCIPLINE CONCERNED WITH THE HUMAN PROBLEM OF ADAPTATION TO DISABILITY AND HANDICAP," STATES GOLDBERG (1976, P. 66). REHABILITATION RESEARCH IS A SPECIAL DISCIPLINE CONCERNED LESS WITH THE TREATMENT OR PREVENTION OF DISABILITY THAN HOW THE DISABILITY AFFECTS THE PHYSICAL, PSYCHOLOGICAL, SOCIAL, AND VOCATIONAL FUNC-

TIONING OF PEOPLE WITH DISABILITIES (GOLDBERG, 1976). THE BASIC PURPOSE OF REHABILITATION RESEARCH IS TO UNDERSTAND HOW DISABILITY AFFECTS THE FUNCTIONING OF THE INDIVIDUAL. THIS PURPOSE IS ACHIEVED THROUGH THE USE OF THE SCIENTIFIC METHOD WHICH IS A SET OF PROCEDURES DESIGNED TO LIMIT BIASES ABOUT THE EFFECTS OF DISABILITY ON THE INDIVIDUAL'S FUNCTIONING. REHABILITATION RESEARCH MAY BE EITHER BASIC OR APPLIED RESEARCH. BASIC RESEARCH ATTEMPTS TO EXTEND SCIENTIFIC THEORY AND LAY A FOUNDATION FOR RESEARCH. APPLIED RESEARCH, ALTHOUGH HAVING MORE LIMITED OBJECTIVES, ATTEMPTS TO ADDRESS SPECIFIC PROBLEMS ENCOUNTERED BY THE PRACTITIONER, THE CONSUMER, OR THE AGENCY (GOLDBERG, 1976). THE METHODOLOGIES USED IN THE TWO TYPES OF RESEARCH MAY BE SIMILAR, BUT THE TWO DIFFER IN THE KINDS OF QUESTIONS ASKED.

HOW THE UNDERSTANDING OF THE EFFECTS OF DISABILITY ON FUNCTIONING IS ACHIEVED IS WHAT IS KNOWN AS THE METHODOLOGICAL PROCEDURE. THERE ARE A NUMBER OF RESEARCH METHODOLOGIES. THE METHODOLOGIES MAY RANGE FROM THE SIMPLE TO THE COMPLEX. THE AIM OF EACH METHODOLOGICAL DESIGN WHETHER SIMPLE OR COMPLEX IS TO LIMIT THE EFFECT OF BIAS ON THE FINDINGS AND HENCE THE UNDERSTANDING OF THE EFFECTS OF DISABILITY ON FUNCTIONING. THE MORE ADEQUATE THE METHODOLOGICAL DESIGN THE MORE INFERENCES AND CONCLUSIONS CAN BE DRAWN FROM THE RESEARCH ACTIVITY. THESE CONCLUSIONS CAN THEN BE EMPLOYED IN THE DESIGN OF REHABILITATION SERVICE DELIVERY SYSTEMS.

REHABILITATION RESEARCH LIKE ALL RESEARCH HAS THE POTENTIAL OF BEING USED. INDEED, REHABILITATION RESEARCH MAY BE UNIQUE PARTICULARLY IN THE HUMAN SERVICES FIELDS BECAUSE OF THE CONCERTED EFFORTS TAKEN TO ENSURE THE FINDINGS ARE USED (ENGSTROM, 1975; MURPHY, 1975). RESEARCH UTILIZATION SEMINARS LIKE THIS ONE AND THOSE OF OTHER ORGANIZATIONS LIKE

THE AMERICAN FOUNDATION FOR THE BLIND ARE DESIGNED TO ENHANCE THE UTILIZATION OF RESEARCH. WHILE SUCH SEMINARS MAY ENHANCE THE LEVEL AND RATE AT WHICH RESEARCH FINDINGS ARE ADAPTED BY PRACTITIONERS, THEY ONLY SERVE AS THE VEHICLE FOR ADAPTATION OF NEW TECHNIQUES, PRACTICES, AND APPROACHES. THE REAL REASON FOR SUCH SEMINARS IS TO AID THE POTENTIAL RESEARCH USER IN PERCEIVING THE RESEARCH AS MEETING SPECIFIC NEEDS AND BEING ECONOMICAL TO ADAPT AND PUT INTO PRACTICE.

THE REHABILITATION RESEARCH PROGRAM OF THE REHABILITATION RESEARCH AND TRAINING CENTER ON BLINDNESS AND LOW VISION EMPHASIZES THE INVESTIGATION OF THE EFFECTS OF BLINDNESS AND SEVERE VISUAL IMPAIRMENT ON THE CAREER DEVELOPMENT OF BLIND AND SEVERELY VISUALLY IMPAIRED PERSONS. THE RESEARCH PROGRAM OF THE CENTER IS BEING GUIDED BY THE CENTER'S CAREER DEVELOPMENT INTERVENTION STRATEGIES (CDIS) MODEL. THIS MODEL ADDRESSES ISSUES RAISED BY THE IMPACT OF BLINDNESS AND OTHER SEVERE VISUAL IMPAIRMENTS ON THE INDIVIDUAL'S CAREER DEVELOPMENT. CAREER DEVELOPMENT RESEARCH (HILTON, 1962; OSIPOW, 1968) UNTIL RECENTLY HAS BEEN DESCRIPTIVE OF THE SIGHTED POPULATION'S CAREER DEVELOPMENT WITHOUT PURPOSIVE INTERVENTIONS. MORE RECENTLY (HOLLAND, MAGOON & SPOKANE, 1981; FRETZ & LEONG, 1982), ATTENTION HAS BEEN GIVEN TO IDENTIFYING, AMONG SIGHTED PERSONS, THOSE WHO MIGHT BENEFIT FROM DIFFERENTIAL CAREER INTERVENTIONS. SOME WORK HAS BEEN DONE IN THE AREA OF THE CAREER DEVELOPMENT INTERVENTIONS FOR SPECIAL NEEDS POPULATIONS (COOK, 1977). HOWEVER, THE MAJORITY OF THESE PROJECTS HAVE NEGLECTED THE CAREER DEVELOPMENT NEEDS OF BLIND AND SEVERELY VISUALLY IMPAIRED PERSONS WHILE EMPHASIZING THE NEEDS OF PERSONS WHO ARE MENTALLY RETARDED OR CULTURALLY DISADVANTAGED. A 1980 STUDY OF THE NORTH CAROLINA REHABILITATION RESEARCH AND TRAINING CENTER IN BLINDNESS

(STATEMENT OF CRITICAL, 1980) INDICATED THAT EIGHT PRIORITY ONE RESEARCH AREAS RELATING TO THE CENTER'S CAREER DEVELOPMENT MODEL WERE IDENTIFIED BY OVER 200 PUBLIC AND PRIVATE ORGANIZATIONS INVOLVED IN WORK WITH BLIND AND VISUALLY IMPAIRED PEOPLE. THESE EIGHT PRIORITY ONE AREAS INCLUDE UNEMPLOYMENT AND UNDEREMPLOYMENT OF BLIND AND VISUALLY IMPAIRED PERSONS, EMPLOYMENT SUPPORT SERVICES, CAREER GROWTH, JOB DEVELOPMENT, JOB IDENTIFICATION, REFERRAL SERVICES, AND SOCIAL BARRIERS TO THE EMPLOYMENT OF BLIND AND VISUALLY IMPAIRED PERSONS.

THE CAREER DEVELOPMENT INTERVENTION STRATEGY MODEL CONTAINS FOUR ELEMENTS THAT ARE RELATED TO THE CAREER DEVELOPMENT OF PERSONS WHO ARE BLIND OR SEVERELY VISUALLY IMPAIRED. THE FOUR ELEMENTS ARE (A) SITE OF THE DELIVERY OF THE SERVICE; (B) SPECIFIC SERVICES DELIVERED; (C) FUNCTIONAL WORK LEVEL OF THE INDIVIDUAL WITH THE VISUAL IMPAIRMENT, AND (D) THE CAREER DEVELOPMENT STAGE OF THE INDIVIDUAL WITH THE VISUAL IMPAIRMENT. THIS MODEL IS INTENDED TO GENERATE RESEARCH HYPOTHESES AND TO INCREASE THE LIKELIHOOD THAT THE RESEARCH PROGRAM OF THE MSU CENTER ADDRESSES PROBLEMS IMPACTING THE CAREER DEVELOPMENT OF VISUALLY IMPAIRED PERSONS.

EACH OF THE CENTER'S ELEVEN RESEARCH PROJECTS RELATE DIRECTLY TO THE CAREER DEVELOPMENT INTERVENTION STRATEGY MODEL. EIGHT OF THESE PROJECTS ADDRESS QUESTIONS RELATED TO THE CAREER SERVICES DIMENSION OF THE MODEL. THE CAREER SERVICES ADDRESSED INCLUDE EMPLOYMENT SUPPORT SERVICES, VOCATIONAL TRAINING, AND ASSESSMENT SERVICES. TWO PROJECTS ASK QUESTIONS RELATED TO THE OUTCOME OF THE REHABILITATION PROCESS AND ONE ADDRESSES THE OVERALL MODEL.

WHAT IS THE ROLE OF REHABILITATION RESEARCH IN THE ENHANCEMENT OF THE EMPLOYMENT OF BLIND AND VISUALLY IMPAIRED PERSONS? IT IS TO

DETERMINE OR CLARIFY THE RELATIONSHIP BETWEEN AND AMONG VARIABLES WHICH AFFECT THE CAREER DEVELOPMENT OF BLIND PERSONS. REHABILITATION RESEARCH AND TRAINING CENTERS ARE ALSO CHARGED WITH MAKING INFORMATION ABOUT THESE RELATIONSHIPS ACCESSIBLE TO PRACTITIONERS AND TO CONSUMERS AND TO ASSIST IN THE UTILIZATION OF THIS RESEARCH INFORMATION IN THE DELIVERY OF REHABILITATION SERVICES.

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PREDICTING EMPLOYMENT OUTCOMES OF BLIND CLIENTS OF STATE VOCATIONAL REHABILITATION AGENCIES

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Assessment of the contribution of vocational rehabilitation services and the search for correlates or "predictors" of successful rehabilitation have been researched for some time, and these efforts have met with fair success (Berkowitz, et. al., 1975). Berkowitz (1980) states that successful vocational rehabilitation clients tend to be younger, white, married, and more highly educated: That potentially successful clients need to be identified so they can receive appropriate treatment needed to return them to the labor market. However, such studies typically have not focused on blind populations.

A small number of studies have focused on blind populations and have reported the following to be associated with successful rehabiltation: Sex and presence of residual vision (Gillman, Simon, & Shinn, 1978); Intelligence and educational Level (Bauman & Yoder, 1966); Age, Age at Onset, Educational Level, Intelligence, Race, Sex, and Residual Vision (Lukoff & Whitman, 1970); Client-related Characteristics of Age, Race, Sex marital status, Number of dependents, Educational Level, Intelligence, travel ability and seven program-related factors (Crouse, 1974); and orientation/mobility skills, work status before services, age, age at onset, and number of years blind (Knowles, 1969). Factors not previously investigated but addressed in this study include status of labor market, accessibility (proximity) of counseling services, and rehabilitation and protected employment facilities.

Methodological shortcomings of previous research were that (1) outcome was viewed in an imprecise, "successful" vs. "unsuccessful" classification, which Dunn (1975) argues results in an underestimation

OF CLIENT IMPROVEMENT; (2) THE SAMPLES EMPLOYED, AND HENCE GENERALIZABILITY, WERE RESTRICTED: AND (3) THE DATA, USUALLY FROM STANDARD FORMS ON COMPUTER TAPES, COULD NOT BE CHECKED FOR ACCURACY.

THIS STUDY ATTEMPTED TO OVERCOME OMISSIONS AND METHODLOGICAL PROBLEMS OF PREVIOUS RESEARCH ON BLIND POPULATIONS AND TO PROVIDE RESULTS WHICH CAN ASSIST STATE VOCATIONAL REHABILITATION AGENCIES IN IDENTIFYING SERVICES AND ALLOCATING RESOURCES TO MAXIMIZE REHABILITATION OUTCOMES.

SUBJECTS

SIX HUNDRED NINETEEN CASE FOLDERS OF BLIND OR SEVERELY VISUALLY IMPAIRED VOCATIONAL REHABILITATION CLIENTS CLOSED IN STATUS 26 (REHABILITATED) OR STATUS 28 (NOT REHABILTATED) DURING FEDERAL FISCAL YEARS 1978, 1979, AND 1980 FROM FLORIDA, KANSAS, MISSISSIPPI, AND OHIO WERE REVIEWED. THE CHOICE OF STATES WAS GUIDED BY FISCAL CONSTRAINTS AND TO OBTAIN RURAL/URBAN, GEOGRAPHIC, AGENCY STRUCTURE AND SIZE REPRESENTAION.

PROCEDURE

BASED ON REQUESTED ESTIMATES FROM THE REHABILITATION SERVICES ADMINISTRATION (RSA) FOR STATUS 26 AND STATUS 28 CASE CLOSURES, A TOTAL ACCESSIBLE POPULATION SIZE FOR ALL FOUR STATES WAS ESTABLISHED. THE NUMBER OF CASES SELECTED FOR EACH STATE WAS PROPORTIONAL TO THE NUMBER OF STATUS 26 AND STATUS 28 CLOSURES IN THAT STATE. THE RESULTING SAMPLE SIZES FOR EACH STATE WERE AS FOLLOWS: FLORIDA 146, KANSAS 42, MISSISSIPPI 124, AND OHIO 307. SYSTEMATIC QUOTA SAMPLING WAS EMPLOYED BY SELECTING EVERY 17TH CASE FROM A LIST OF ELIGIBLE CASES UNTIL THE APPROPRIATE QUOTAS WERE MET. (THE ONLY EXCEPTION WAS

IN KANSAS WHERE FY'S 1979 AND 1980 CASES WERE SAMPLED MORE HEAVILY TO MAKE UP FOR THE UNAVAILABILITY OF 1978 CASES, WHICH HAD ALREADY BEEN DESTROYED.

DATA WERE COLLECTED DIRECTLY FROM EXAMINATION OF THE CASEFILES BY A TRAINED RESEARCH TEAM AND RECORDED ON A SPECIAL, PRETESTED CODING FORM DESIGNED FOR THE STUDY. SPECIFIC FACTUAL INFORMATION WAS ABSTRACTED FROM THE RSA-300 REPORTING FORM (71 VARIABLES), CASEFILE INFORMATION (32 VARIABLES) SUCH AS MOBILITY TRAINING, OCCUPATIONAL HISTORY, PROXIMITY, AND 28 SPECIFIC SERVICE EXPENDITURES.

RESULTS

AFTER EXTENSIVE CHECKING, THE DATA WERE ENTERED FOR COMPUTERIZED STATISTICAL ANALYSIS. EXTENSIVE DESCRIPTIVE STATISTICS WERE OBTAINED. AFTER SCREENING OF "CANDIDATE" PREDICTOR VARIABLES BY REQUIRING A SIMPLE CORRELATION OF AT LEAST 0.1 WITH THE CRITERION; 39 PREDICTOR VARIABLES WERE IDENTIFIED FOR USE IN PREDICTING FOUR OUTCOME CATEGORIES. THE WORK STATUS OUTCOME CATEGORIES WERE AS FOLLOWS: WAGE EARNER I -- COMPETITIVE EMPLOYMENT, SELF-EMPLOYED, AND BUSINESS ENTERPRISE. WAGE EARNER II --SHELTERED WORKSHOP AND HOMEBOUND INDUSTRY. NON-WAGE EARNER I --HOMEMAKER, UNPAID FAMILY WORKER. NON-WAGE EARNER II -- NOT WORKING.

MULTIPLE DISCRIMINANT ANALYSIS (MORRISION, 1967) INDICATED A 60 PERCENT CORRECT CLASSIFICATION FOR ACTUAL VS. PREDICTED GROUP MEMBERSHIP.

CONCLUSIONS

THE BEST PREDICTORS OF WORK STATUS CATEGORY AT CLOSURE WERE AGE ONSET OF BLINDNESS, PERSONAL ADJUSTMENT TRAINING/VOCATIONAL ADJUSTMENT

TRAINING RECEIVED, SEX, EDUCATION, RECEIPT OF PHYSICAL RESTORATION, OCCUPATIONAL GOAL, PROXIMITY TO REHABILITATION COUNSELOR, AND RECEIPT OF INSTITUTIONAL OR NON-INSTITUTIONAL TRAINING.

RESULTS WILL ALLOW PREDICTION OF REHABILITATION OUTCOME FROM PERSONAL AND SERVICE INFORMATION. THE STUDY ALSO PROVIDES A LARGE, ACCURATE DATA BASE FOR ADDITIONAL RESEARCH ON LEGALLY BLIND VOCATIONAL REHABILITATION CLIENTS.

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RESPONSE TO PREDICTING EMPLOYMENT OUTCOMES OF BLIND CLIENTS OF STATE VOCATIONAL REHABILITATION AGENCIES

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Mississippi Vocational Rehabilitation
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WE WOULD ALL TEND TO AGREE THAT WE CAN MAKE BETTER AND MORE EFFECTIVE UTILIZATION OF SCARCE RESOURCES BY IDENTIFYING THOSE FACTORS THAT CONTRIBUTE TO SUCCESSFUL REHABILITATION. THIS FUNCTIONAL OUTCOME STUDY ("PREDICTING EMPLOYMENT OUTCOMES OF BLIND AND SEVERELY VISUALLY IMPAIRED CLIENTS OF STATE REHABILITATION AGENCIES") IS ONE OF THE LARGEST AND MOST COMPREHENSIVE STUDIES OF REHABILITATION OUTCOMES INVOLVING LEGALLY BLIND ADULTS EVER REPORTED. THE STAFF OF MISSISSIPPI VOCATIONAL REHABILITATION FOR THE BLIND WAS VERY PLEASED TO BE ABLE TO PARTICIPATE IN THE STUDY FOR THERE ARE NUMEROUS IMPLICATIONS FOR VOCATIONAL REHABILITATION AGENCIES.

THE STUDY OFFERS SUPPORT FOR CONCLUSIONS REACHED BY OTHER RESEARCHERS INVOLVING OTHER DISABILITY CATEGORIES. FOR EXAMPLE, THOSE LEGALLY AND TOTALLY BLIND ADULTS WHO ARE YOUNGER, MALE, BETTER EDUCATED AND HAVE RECEIVED FACILITY OR INSTITUTIONAL TRAINING ARE MORE APT TO BE CLOSED IN COMPETITIVE EMPLOYMENT OR AS SELF-EMPLOYED OR EMPLOYED IN THE BUSINESS ENTERPRISE PROGRAM THAN THOSE WHO ARE OLDER, FEMALE, LESS EDUCATED. WHILE SUCCESSFUL CLIENTS TEND TO BE YOUNGER, MARRIED, BETTER EDUCATED OR YOUNGER WHEN FIRST DISABLED. IT IS DIFFICULT TO DEVELOP AND IMPLEMENT WRITTEN POLICIES AND PROCEDURES THAT EFFECTIVELY ALLOW AN AGENCY COUNSELOR TO SCREEN OUT APPLICANTS WHO MAY BE OLDER, SINGLE OR POORLY EDUCATED BECAUSE OF AN INDIVIDUAL'S RIGHTS TO APPLY FOR SERVICES AND BE GIVEN AN ADMINISTRATIVE REVIEW/FAIR HEARING IF DENIED SERVICES.

IT WAS INTERESTING TO NOTE THAT GROUP 4 (STATUS 28 CLOSURES - NON-REHABILITATED) WAS MOST LIKELY AND GROUP 1 (STATUS - COMPETITIVE EMPLOYMENT, SELF-EMPLOYED OR BEP) WAS LEAST LIKELY TO BE RECEIVING SSDI

BENEFITS DURING THE SERVICE PERIOD. THIS IS CONSISTENT WITH THE WEST VIRGINIA RESEARCH AND TRAINING CENTER FINDINGS THAT CLIENTS RECEIVING BENEFITS FROM THREE OR MORE SOURCES SHOWED A ZERO PERCENT PROBABILITY OF SUCCESSFUL VR CLOSURE.

THIS STUDY REFLECTS THE NEED TO HAVE STANDARDIZED REPORTING FORMS USED BY ALL REHABILITATION AGENCIES. ALTHOUGH THE OFFICE OF MANAGEMENT AND BUDGET HAS ELIMINATED THE USE OF THE R-300 FORM, THE REHABILITATION AMENDMENTS OF 1984 CALL FOR MORE SPECIFIC DATA COLLECTION FOR PURPOSES OF ENHANCING PROGRAM EVALUATION EFFORTS. BECAUSE OF THE NUMBER OF FILES WHICH CONTAINED MISSING DATA, THERE SEEMS TO BE A WIDESPREAD NEED TO ENCOURAGE VOCATIONAL REHABILITATION STAFF TO MORE ADEQUATELY AND ACCURATELY COMPLETE CASE DATA FORMS. FOR EXAMPLE, DURING THE COURSE OF THIS STUDY CENTER STAFF FOUND THAT MISSISSIPPI COUNSELORS OFTEN DID NOT REPORT A SECONDARY DISABILITY WHEN, IN FACT, ONE WAS WELL DOCUMENTED. IF SECONDARY DISABILITIES AREN'T BEING ADEQUATELY REPORTED, COUNSELORS, IN EFFECT, AREN'T GETTING CREDIT FOR THE SEVERITY OF DISABILITIES BEING SERVED.

THE USE OF THE TOTAL VOCATIONAL QUOTIENT IN THE DATA ANALYSES REFLECTS THAT BLIND AND VISUALLY IMPAIRED PEOPLE ARE BEING PLACED IN JOBS ON A LEVEL COMMENSURATE WITH THE SIGHTED POPULATION AND IN A WIDE VARIETY OF JOBS. GIVEN THE CONTINUATION OF SCARCE RESOURCES (BOTH HUMAN AND FISCAL RESOURCES), IT WILL BE INCUMBENT UPON EACH AGENCY TO REVIEW THESE FINDINGS/RESULTS FOR PURPOSES OF SERVING THE MOST PEOPLE POSSIBLE. APPROXIMATELY 60 PERCENT OF THE GROUPED CASES WERE CORRECTLY CLASSIFIED. WE HAVE, THEREFORE, ADDED TO OUR BODY OF KNOWLEDGE BY IDENTIFYING A MODEST AMOUNT OF COMMON VARIANCE BETWEEN

PREDICTOR VARIABLES AND OUTCOME CATEGORIES. HOWEVER, WE SHOULD KEEP IN MIND THAT THIS STUDY IS AN EXPLORATORY SEARCH FOR POTENTIALLY DISCRIMINATING VARIABLES AND, WITH ONLY 31 PERCENT OF THE VARIANCE ACCOUNTED FOR, THERE ARE MANY VARIABLES YET TO BE IDENTIFIED AND STUDIED THAT IMPACT ON REHABILITATION OUTCOME.

PRODUCTIVITY AND COMFORT OF THE VISUALLY IMPAIRED WORKER AS A FUNCTION OF LOW VISION AID USAGE AND ILLUMINATION LEVEL AND COLOR CONTRAST MODIFICATIONS

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VISUAL PERFORMANCE IS AFFECTED BY MANY VARIABLES. THE ABILITY TO PERCEIVE A STIMULUS IS DEPENDENT ON BOTH THE PROCESS OF SIGHT (THE PHYSIOLOGICAL COMPONENTS OF VISION) AND ON THE CHARACTERISTICS OF THE VISUAL ENVIRONMENT. THIS INTERDEPENDENCE OF VARIABLES INFLUENCING VISUAL PERFORMANCE UNDERLIES COMMON PRACTICES DESIGNED TO COMPENSATE FOR LOSSES IN VISUAL ACUITY SUCH AS INCREASING THE ILLUMINATION, CONTRAST, OR SIZE OF THE STIMULUS. LIKEWISE, OPTICAL DEVICES OR LOW-VISION AIDS ARE EMPLOYED TO ENHANCE THE CAPABILITIES OF THE VISUAL SYSTEM. HOWEVER, LITTLE RESEARCH TO DATE HAS INVESTIGATED THE EXTENT TO WHICH SUCH STRATEGIES ACTUALLY CONTRIBUTE TO THE PERFORMANCE AND COMFORT OF THE LOW-VISION WORKER.

PREVIOUS RESEARCH INDICATES THAT HIGHER LEVELS OF ILLUMINATION CAN INCREASE WORKERS' PRODUCTIVITY AND COMFORT IN A VARIETY OF INDUSTRIES AND OCCUPATIONS, ALTHOUGH THE EXTENT OF INCREASE IS NOT ALWAYS LARGE. STUDIES ALSO INDICATE THAT VISUALLY IMPAIRED PERSONS GENERALLY BENEFIT EVEN MORE FROM INCREASES IN ILLUMINATION THAN SIGHTED PERSONS. FURTHERMORE, THERE IS GREATER VARIABILITY IN LIGHTING LEVELS CHOSEN BY VISUALLY IMPAIRED PERSONS THAN OTHERS.

THE USE OF COLOR CONTRAST TO AID VISUAL FUNCTION HAS RECEIVED LESS ATTENTION. HOWEVER, STUDIES DO INDICATE THAT THE DEGREE OF CONTRAST DOES AFFECT PERFORMANCE AND THAT WHAT CONSTITUTES AN OPTIMUM CONTRAST VARIES WITH THE INDIVIDUAL AND THE TASK CHARACTERISTICS.

WHILE LOW-VISION AIDS HAVE BEEN DEVELOPED TO INCREASE SPECIFIC COMPONENTS OF VISUAL FUNCTIONING SUCH AS ACUITY AND SIZE OF THE VISUAL FIELD, LITTLE RESEARCH HAS BEEN DONE TO DATE ON THE EFFECT OF LOW-VISION AIDS ON THE PRODUCTIVITY OR COMFORT OF THE WORKER. SINCE MOST

AIDS HAVE RATHER SPECIFIC AND LIMITED EFFECTS ON VISUAL CAPABILITIES, IT IS LIKELY THAT THE EFFECT ON WORKING PERFORMANCE WILL DEPEND ON THE DEGREE OF MATCH BETWEEN THE VISUAL DEMANDS OF THE JOB AND THE PARTICULAR LOW-VISION AID.

PROJECT OBJECTIVES

THIS RESEARCH PROJECT WAS GUIDED BY SEVERAL SPECIFIC OBJECTIVES:

1. TO DEVELOP STRATEGIES FOR TESTING AND IDENTIFYING OPTIMUM ILLUMINATION LEVELS AND COLOR CONTRASTS FOR SEVERELY VISUALLY IMPAIRED PERSONS,
2. TO GAIN SOME INDICATION OF THE TYPE AND DEGREE OF VARIATION AMONG THE IDENTIFIED OPTIMUM CONDITIONS ACROSS INDIVIDUALS,
3. TO DEVELOP STRATEGIES FOR MODIFYING WORK SITES TO INCORPORATE SUCH ENVIRONMENTAL ENHANCERS IN A VISUALLY MEANINGFUL MANNER,
4. TO DETERMINE THE IMPACT OF WORK SITE MODIFICATIONS ON THE PRODUCTIVITY AND COMFORT OF THESE WORKERS,
5. TO DETERMINE THE IMPACT OF LOW-VISION AIDS ON THE PRODUCTIVITY AND COMFORT OF THESE WORKERS, AND
6. TO ESTABLISH THE CONTRIBUTION OF LOW-VISION AIDS TO THE EFFICACY OF ENVIRONMENTAL MODIFICATIONS.

THOSE OBJECTIVES WHICH ARE DIRECTLY TESTABLE FORM THE BASIC HYPOTHESES OF THE STUDY.

SUMMARY OF FINDINGS

LOW-VISION SUBJECTS, SEVERAL OF WHOM FIRST RECEIVED LOW-VISION AIDS (LVA), WERE TESTED WITH RESPECT TO VARIOUS ILLUMINATION LEVELS AND COLOR CONTRAST CONDITIONS TO ASCERTAIN WHETHER SPECIFIC LEVELS OF THESE VARIABLES COULD FACILITATE VISUAL ACUITY. AN OPTIMUM LEVEL OF LIGHTING AND COLOR CONTRAST WAS IDENTIFIED FOR EACH SUBJECT. RESULTS OF PRELIMINARY TESTING INDICATED THAT FOR AT LEAST SOME INDIVIDUALS, SPECIFIC LIGHTING CONDITIONS AND COLOR CONTRAST WERE RELATED TO BETTER PERFORMANCE, BUT THERE WERE CONSIDERABLE INDIVIDUAL DIFFERENCES IN TERMS OF WHAT CONSITUTED OPTIMUM CONDITIONS FOR EACH SUBJECT AND TO WHAT DEGREE OPTIMUM CONDITIONS FACILITATED VISUAL PERFORMANCE.

THE JOB-SITE OF EACH SUBJECT WAS MODIFIED IN ACCORDANCE WITH THAT SUBJECT'S OPTIMUM ILLUMINATION AND COLOR CONDITIONS. THE SUBJECTS, MOST OF WHOM WERE EMPLOYED IN SEWING JOBS, RECEIVED EACH MODIFICATION SEPARATELY AND IN COMBINATION, IN A PREARRANGED SEQUENCE. BEFORE AND AFTER EACH MODIFICATION (OR TREATMENT) PHASE, THE MODIFICATIONS WERE WITHDRAWN, RESULTING IN NON-TREATMENT PHASES ALTERNATING WITH TREATMENT PHASES. THE DESIGN WAS AN A-B-A-C-D-A SINGLE-SUBJECT, WITHDRAWAL DESIGN, WITH A REPRESENTING NON-TREATMENT PHASES AND B, C, AND D REPRESENTING LIGHT ONLY, COLOR-ONLY, AND COLOR-PLUS-LIGHT MODIFICATION PHASES, RESPECTIVELY. THE DEPENDENT MEASURE WAS PRODUCTIVITY RATES.

THERE WAS CONSIDERABLE VARIABILITY AMONG THE SUBJECTS. SOME SUBJECTS EXHIBITED HIGHER PRODUCTION RATES RELATED TO ONE OR MORE OF THE MODIFICATIONS, WHILE OTHERS DID NOT. OF THOSE WHO DID, BETTER PERFORMANCE WAS RELATED TO THE LIGHT MODIFICATIONS AND NOT TO COLOR MODIFICATIONS. IN GENERAL, PRODUCTION RATES WERE HIGHLY VARIABLE,

SUGGESTING CONSIDERABLE INFLUENCE BY OTHER UNCONTROLLED EXTRANEOUS AND WITHIN SUBJECT VARIABLES (FOR EXAMPLE, MOTIVATION). BASELINE DATA TAKEN BEFORE AND AFTER THE RECEIPT OF LVA'S INDICATED INCREASED PERFORMANCE FOR SEVERAL OF THOSE SUBJECTS USING LVA'S.

AFTER PRODUCTIVITY DATA COLLECTION, SUBJECTS WERE ASKED TO RESPOND TO COMFORT QUESTIONNAIRES DESIGNED TO MEASURE THEIR ATTITUDES CONCERNING LVA'S AND/OR COLOR AND LIGHT MODIFICATIONS. THE MAJORITY OF SUBJECTS WERE FAVORABLE WITH RESPECT TO ALL MODIFICATIONS. HOWEVER, THE PERCENTAGE OF FAVORABLE RESPONSES TO EACH TYPE OF MODIFICATION INDICATED GREATEST FAVORABILITY (I.E., MOST BENEFICIAL) TO THE LVA, NEXT TO THE LIGHT MODIFICATION, AND LEAST TO THE COLOR MODIFICATION.

IMPLICATIONS FOR CAREER DEVELOPMENT ENHANCEMENT PRACTICE

THE DIFFICULTIES OF FIELD RESEARCH ARE WELL-KNOWN. STUDIES OF THIS NATURE ARE COMPLICATED BY THE MANY FACTORS BEYOND ANY RESEARCHER'S CONTROL. THE RESULT OF THESE COMPLICATIONS IS THAT WHILE THE ISSUES MAY BE PARTICULARLY GERMANE (BASED AS THEY ARE ON REAL-WORLD SITUATIONS) CONCLUSIONS OFTEN MUST REMAIN SOMEWHAT TENTATIVE, SINCE THE LACK OF CONTROL DOES NOT ALLOW FOR THE COMPLETE ELIMINATION OF ALTERNATIVE EXPLANATIONS FOR THE FINDINGS. WITH THIS QUALIFICATION IN MIND, THE FOLLOWING STRATEGIES ARE RECOMMENDED WITH RESPECT TO PERFORMANCE ENHANCEMENT THROUGH ENVIRONMENTAL MODIFICATIONS.

1. <u>INDIVIDUALIZED TESTING FOR ESTABLISHING ILLUMINATION LEVELS OPTIMALLY NEEDED BY THE PARTIALLY SIGHTED WORKER SHOULD BE DONE.</u> LOW-VISION INDIVIDUALS DIFFER WIDELY IN TERMS OF WHAT TYPE OF MODIFICATIONS ARE BENEFICIAL AND THE EXTENT TO WHICH THEY MAY BE OF BENEFIT.

2. Frequent retesting is appropriate for individuals with progressive eye conditions. As changes occur in a person's acuity and field characteristics, it is to be expected that visual and illumination level needs will change as well.

3. Testing for optimum environmental enhancers should be job-specific. Visual needs are somewhat task-specific depending on the individual's work strategies, experience with the task, and the nature of the task. An identified "optimum" for one particular task (e.g., an acuity test) will not necessarily benefit the individual in doing other tasks or activities. The testing should incorporate as many components (i.e., visual demand characteristics) as possible. There exists the need for a standard protocol to assess the visual demands of specific jobs.

4. Specific enviromental modifications should be strategically devised and refined. Knowledge of optimum conditions for an individual is worthless if attempts to modify his/her environment fall short of incorporating those characteristics in a visually meaningful way. This is an especially critical point to make regarding such stimulus characteristics as color contrast which are not easily incorporated into some job tasks. Job analysis and visual demand assessments can help to identify the environmental characteristics that are both: (A) Modifiable and (B) Functionally visually meaningful.

5. Where feasible, flexible illumination and color modifications should be incorporated. A good example of this strategy is

THE USE OF RHEOSTATICALLY CONTROLLED LIGHTING WHICH AN EMPLOYEE CAN ADJUST ACCORDING TO NEED. IT IS IMPORTANT TO REMEMBER THAT THE CONDITIONS WHICH ARE OPTIMUM FOR A TASK OF LIMITED DURATION ARE NOT NECESSARILY ALWAYS BENEFICIAL. FOR EXAMPLE, WHILE A VERY HIGH LEVEL OF ILLUMINATION MAY INCREASE VISUAL FUNCTION FOR SPECIFIC TASKS, THAT SAME LEVEL MAY RESULT IN EYE STRAIN OR GLARE DISCOMFORT IF USED FOR LONG HOURS AT A TIME. IT IS ALSO LIKELY THAT AN INDIVIDUAL'S VISUAL NEEDS MAY CHANGE ACCORDING TO VARIOUS INTERNAL STATES AND EXTERNAL CONDITIONS. THUS, WORK PLACE ACCOMMODATIONS WHICH THEMSELVES CAN BE MODIFIED BY THE WORKER ARE LIKELY TO BE THE MOST EFFICIENT AND EFFECTIVE.

RESPONSE TO PRODUCTIVITY AND COMFORT OF THE VISUALLY IMPAIRED WORKER AS A FUNCTION OF LOW VISION AID USAGE AND ILLUMINATION LEVEL AND COLOR CONTRAST MODIFICATIONS

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The field of low vision is a relatively new discipline. The New York Lighthouse Low Vision Service, perhaps the premier full-line low vision clinic in the country, first started a residency training program for clinicians in 1976. Standards for accreditation of low vision clinics through the National Accreditation Council were adopted in June, 1981. A Masters Degree in low vision rehabilitation was offered for the first time this past fall, 1983. Low vision service actually continues to be a newly emerging field.

A great deal of research is not available about the illumination and color contrast needs of the severely visually impaired. Opinions are in the literature. Limited research is available. But, there is not a wealth of research. Arriving at a recommendation for adequate lighting or color contrast at this time is basically a trail and error situation. No standards have been established. No procedures have been established. Therefore, the process is very time consuming and expensive.

The strength of Dr. Miles' study is that it helps to establish an empirical base regarding illumination and color contrast requirements for the visually impaired. The study includes strategies to test and identify optimum levels. Also included was the objective to determine the impact on productivity and comfort.

What I would like to see as the long term product of the research in this area is a manual for practitioners. Ideally, the manual would indicate guidelines for illumination level and color contrast requirements considering specific eye pathology and specific jobs.

THE ILLUMINATING ENGINEERING SOCIETY HAS APPROACHED THIS SUBJECT FOR THE NORMALLY SIGHTED. A SIGNIFICANT NEED EXISTS TO NARROW THE WIDE RANGE OF POSSIBILITIES OF REQUIREMENTS ONE MIGHT ANTICIPATE FOR THE VISUALLY IMPAIRED.

I BASICALLY AGREE WITH THE CONCLUSIONS OF THE STUDY AND RECOMMENDATIONS FOR FURTHER RESEARCH. THE STRATEGY OF INDIVIDUAL TESTING IS OF PARTICULAR IMPORTANCE SINCE EACH PERSON'S VISION IS UNIQUE. JOB-SPECIFIC EVALUATION IS NECESSARY BECAUSE THE NEEDS CAN VARY, NOT ONLY CONSIDERING THE JOB, BUT ALSO FROM ROOM TO ROOM AND TASK TO TASK. I THINK WHEN POSSIBLE, EVALUATION SHOULD BE DONE ON THE JOB. PERHAPS A LOW VISION SERVICE TEAM MEMBER SHOULD HAVE THE RESPONSIBILITY OF ON-SITE EVALUATION.

FLEXIBLE ENVIRONMENTAL MODIFICATIONS FOR ILLUMINATION AND CONTRAST SEEM ESPECIALLY APPROPRIATE. FOR INSTANCE, DIMMER CONTROLLED PORTABLE LAMPS CAN BE ADAPTED CONSIDERING FLUCTUATING VISION OR CHANGING CIRCUMSTANCES ON THE JOB. ALSO, THE AMBIENT ROOM LIGHTING MUST BE ADEQUATE. FOUR METHODS ARE AVAILABLE TO INCREASE THE LUMINANCE FROM ARTIFICIAL LIGHTING: (1) INCREASE THE OUTPUT OF THE BULB; (2) REDUCE THE DISTANCE FROM THE BULB TO THE TASK; (3) USE PORTABLE LAMPS OR ILLUMINATED OPTICAL AIDS FOR SUPPLEMENTAL LIGHTING; OR (4) ALTER THE COLOR OF REFLECTIVE SURFACES SUCH AS WALLS, CEILINGS OR DESK TOPS TO REFLECT MORE LIGHT.

WHAT IS THE RANGE OF ILLUMINATION OR COLOR CONTRAST THAT SHOULD BE AVAILABLE TO THE INDIVIDUAL? THE MOST IMPORTANT ASPECT OF THE STUDY TO ME WAS THE OBJECTIVE "TO GAIN SOME INDICATION OF THE TYPE AND

DEGREE OF VARIATION REQUIRED ACROSS INDIVIDUALS." I WOULD LIKE TO SEE THIS PROCEDURE CARRIED FORWARD AND REFINED. I WOULD LIKE TO HAVE A MANUAL FOR GUIDELINES OF MAXIMUM AND MINIMUM REQUIREMENTS DEPENDING ON THE DIAGNOSIS OF EYE PATHOLOGY. A STUDY BY THE NEW YORK LIGHTHOUSE ON MACULAR DEGENERATION AND LIGHTING INDICATED A WIDE RANGE OF PREFERENCES. BUT THERE WAS A DISCERNABLE MINIMUM TO MAXIMUM RANGE OF 8 TO 20 FOOT CANDLES. THIS TYPE OF INFORMATION IS BADLY NEEDED IN THE FIELD OF LOW VISION.

OBVIOUSLY, AS A LOW VISION SPECIALIST, I THINK THAT THE UTILIZATION OF LOW VISION AIDS IS ESSENTIAL TO MAXIMUM JOB PERFORMANCE FOR VISUALLY IMPAIRED INDIVIDUALS. I THOUGHT IT INTERESTING THAT THE LOW VISION AIDS WERE RATED AS THE MOST FAVORABLE OF THE THREE TREATMENTS BY THE SUBJECTS.

ANOTHER FACTOR IN THE PRESENT STUDY CONCERNING THE LOW VISION AIDS IS INTERESTING. ALL SUBJECTS WERE INITIALLY PRESCRIBED SPECTACLES WITH +3 OR +4 DIOPTER BIFOCAL ADDS AS THE AID OF CHOICE. THESE PRESCRIPTIONS ARE CONVENTIONAL AS MIGHT BE USED BY THE "NORMALLY" SIGHTED. THIS IS INDICATIVE OF ONE TYPE OF LOW VISION SERVICE. TO GENERALIZE, THREE DIFFERENT STYLES OF LOW VISION SERVICE ARE NOW OFFERED. THE FIRST, WHICH I'LL CALL THE OPHTHALMOLOGICAL STYLE, OFFERS MORE CONVENTIONAL PRESCRIPTIONS FOR GENERAL TASKS. THE SECOND, THE OPTOMETRIC STYLE, PRESCRIBES MORE MICROSCOPIC AND TELESCOPIC AIDS, FOR SPECIALIZED TASKS. THE THIRD, THE REHABILITATIVE APPROACH, UTILIZES ASPECTS OF BOTH OF THE ABOVE AND, IN ADDITION, AN ARRAY OF SERVICES

TEACHING THE COMPENSATORY SKILLS FOR BLINDNESS. THESE THREE CATEGORIES ARE USED FOR DESCRIPTIVE PURPOSES AND ARE NOT DEFINITIVE. IN PRACTICE, LOW VISION CLINICS ARE NOT USUALLY LIMITED TO PRECISELY ONE OF THESE STYLES. AND, I THINK DIFFERENT APPROACHES ARE GOOD FOR CREATIVE SOLUTIONS AND INNOVATIVE APPLICATION. HOWEVER, THERE IS A LACK OF CONSISTENCY. I THINK THAT AN AWARENESS OF THESE FACTORS SHOULD BE KEPT IN MIND IN ANY ENDEAVOR TO RESEARCH LOW VISION SERVICES. EACH STYLE OFFERS POTENTIAL ADVANTAGES. THE OPHTHALMOLOGICAL STYLE OFFERS EXTENSIVE MEDICAL CARE AND RELATIVELY INEXPENSIVE AIDS FOR MORE GENERAL TASKS. THE OPTOMETRIC APPROACH OFFERS SOMEWHAT MORE EXPENSIVE AIDS FOR MORE SPECIALIZED TASKS. THE REHABILITATIVE STYLE HAS THE ADVANTAGE OF EXTENSIVE FOLLOW-UP INSTRUCTION WITH THE AIDS DURING COMPENSATORY SKILL TRAINING TO HELP GENERALIZE THE USE OF AIDS INTO DAILY ACTIVITIES.

NOW WHAT ARE THE IMPLICATIONS OF THESE STATEMENTS? A WIDE VARIETY OF LOW VISION TYPE SERVICES ARE AVAILABLE. THE SERVICES RANGE FROM THE INDIVIDUAL PRACTICE, TO THE LARGE UNIVERSITY CLINIC, TO THE REHABILITATION CENTER OR AGENCY SETTING. THE ISSUES OF LIGHTING AND COLOR CONTRAST NEED TO BE ADDRESSED AS PART OF THESE SERVICES.

IN MY MIND, THE DELIVERY OF THESE SERVICES IS BEST ACCOMPLISHED BY AN INTERDISCIPLINARY TEAM APPROACH. BEFORE THE INITIAL LOW VISION CLINICAL EXAMINATION, THERE SHOULD BE AN OPTHALMOLOGICAL EXAMINATION AS REQUIRED BY NAC. THEN AN EXAMINATION IS PERFORMED BY THE LOW VISION CLINICIAN, FOLLOWED BY INSTRUCTION FROM A LOW VISION SPECIALIST IN

PROPER UTILIZATION OF AIDS. TRAINING IN THE COMPENSATORY SKILLS FOR BLINDNESS SHOULD BE AVAILABLE EITHER ON-SITE OR THROUGH REFERRAL, INCLUDING COMMUNICATIONS, INDEPENDENT LIVING SKILLS, ORIENTATION AND MOBILITY AND VOCATIONAL TRAINING. THESE AREAS OF INSTRUCTION SHOULD INCORPORATE THE USE OF THE AIDS INCLUDING ILLUMINATION AND COLOR CONTRAST ENHANCERS. ADDITIONAL VISITS TO THE CLINIC SHOULD BE AVAILABLE FOR ANY REEVALUATION NECESSARY FOR FLUCTUATION OF VISION OR ADJUSTMENT OF AIDS BEFORE THE FINAL PRESCRIPTION IS WRITTEN. AT THE END OF THIS PROCESS, THE PATIENT SHOULD KNOW HOW TO PROPERLY UTILIZE HIS LOW VISION AIDS AND CONTROL HIS ENVIRONMENTAL ENHANCERS. HOW WILL HE OR SHE PAY FOR ALL THIS?

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND THE AMERICAN OPTOMETRIC ASSOCIATION ARE BOTH LOBBYING FOR MEDICARE AND OTHER INSURANCE COVERAGES FOR LOW VISION SERVICES. THIS IS PART OF THE ANSWER. WE NEED CREATIVE APPROACHES TO FUNDING.

WE ALSO NEED MORE RESEARCH TO REFINE THE PROCEDURES AND ESTABLISH GUIDELINES. AS MENTIONED, I THINK GUIDELINES ARE NEEDED TO INDICATE THE ILLUMINATION LEVELS AND CONTRAST NEEDS ACCORDING TO EYE PATHOLOGY. ALSO, GUIDELINES FOR VARIOUS JOBS WOULD BE VERY BENEFICIAL.

WHERE DOES ONE FIND THE POPULATIONS NECESSARY FOR THIS TYPE OF RESEARCH? IN MY OPINION, THE REHABILITATION CENTERS ARE EXCELLENT SOURCES. AT THE ARKANSAS ENTERPRISES FOR THE BLIND, AN IDEAL SITUATION FOR LOW VISION RESEARCH EXISTS. A LARGE POPULATION FROM THROUGHOUT THE UNITED STATES IS CENTRALIZED AT ONE LOCATION. THE MINIMUM STAY AT THE CENTER IS USUALLY 30 DAYS. LAST YEAR OUT OF 314

PERSONS SERVED, 178 WERE INDIVIDUALS WITH LOW VISION. EVERY TYPE OF EYE PATHOLOGY WAS REPRESENTED. I ENCOURAGE THE RESEARCHERS IN THE FIELD OF LOW VISION TO USE THE REHABILITATION CENTERS FOR THE BLIND TO CARRY ON THIS WORK.

THE LOW VISION CLINIC AS AN EMPLOYMENT ENHANCEMENT TECHNIQUE

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The majority of legally blind persons are not functionally blind (Kirchner and Peterson, 1979). Data published by the Public Health Service and the National Institutes of Health during the period 1962-1970 allow an estimate of the visually impaired population (Kirchner and Peterson, 1980). In 1977 partially sighted Americans numbered about 1.7 million of whom 339 thousand were legally blind. Seventy-five percent of the legally blind persons were partially sighted. In other words, the vast majority of the legally blind are not functionally blind, but are partially sighted. They have remaining eyesight or residual vision that can and should be used to cope with their employment and environment.

The long-term goal of this project is to assist partially sighted persons to utilize their remaining vision. Specifically, this project has attempted to determine whether low vision aids are effective in enhancing employment.

SUBJECTS

In the first phase of the study, employees at Mississippi Industries for the Blind were selected for participation in the project. This company has a total of 300 employees with 206 of the employees legally blind. Seventy percent of these legally blind employees have some remaining eyesight. Fifty partially sighted individuals were randomly selected and brought to the Low Vision Aid Clinic at the University of Mississippi School of Medicine for evaluation. The subjects had been partially sighted for at least a year

AND WERE AT LEAST SIX MONTHS AWAY FROM THEIR MOST RECENT EYE SURGERY. PERSONS ELIMINATED FROM THE PROJECT WERE THOSE WHO WERE UNABLE TO COMPLETE THE INTERVIEW PROCESS OR TO CARRY OUT THE ACTIVITIES REQUIRED FOR THE EMPLOYMENT OBSERVATION BECAUSE OF MENTAL OR PHYSICAL DISABILITIES OTHER THAN THOSE RELATED TO VISION.

THE PROJECT WAS APPROVED BY THE UNIVERSITY OF MISSISSIPPI MEDICAL CENTER'S HUMAN INVESTIGATION COMMITTEE AND BY MISSISSIPPI STATE UNIVERSITY'S COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS.

PROCEDURE

EACH VISUALLY IMPAIRED PERSON WAS EVALUATED AND A LOW VISION AID PRESCRIBED IF INDICATED. THIS PROCESS REQUIRED FOUR VISITS TO THE LOW VISION AID CLINIC. THE FIRST VISIT CONSISTED OF A COMPLETE MEDICAL EXAMINATION AND AN INTRAOCULAR EXAMINATION SO THAT A MEDICAL DIAGNOSIS COULD BE OBTAINED. THE SECOND VISIT CONSISTED OF A VISUAL FIELD EXAMINATION BY GOLDMANN PERIMETRY. THE THIRD VISIT FOCUSED ON A LOW VISION AID EXAM WITH PARTICULAR ATTENTION BEING PAID TO THE WORK SITE AND JOB REQUIREMENTS OF EACH INDIVIDUAL. THE FOURTH VISIT CONSISTED OF TRAINING IN USE OF THE AID.

RESULTS

THE SUBJECTS RANGED IN AGE FROM 19 TO 60 YEARS. A WIDE VARIETY OF EYE PATHOLOGY WAS PRESENT IN THE SUBJECTS EXAMINED. THIRTY OF THE SUBJECTS (60%) EITHER HAD POOR VISION AT BIRTH OR DEVELOPED IT DURING EARLY CHILDHOOD. NINE OF THE SUBJECTS HAD GLAUCOMA WHICH WAS EITHER

UNCONTROLLED OR POORLY CONTROLLED. OF THESE, FOUR SUBJECTS WERE NOT USING MEDICATIONS AND HAD BEEN LOST TO MEDICAL FOLLOW-UP.

OF THE FIFTY PARTIALLY SIGHTED SUBJECTS, THIRTY-FOUR WERE FOUND TO BENEFIT FROM SOME TYPE OF OPTICAL AID DURING THE LOW VISION EXAM. THESE SUBJECTS WERE PRESCRIBED OPTICAL AIDS.

INTERVIEWS HAVE BEEN COMPLETED WITH 24 OF THE PERSONS WHO RECEIVED PRESCRIPTIONS FOR LOW VISION AIDS. SEVENTY-FIVE PERCENT OF THE RESPONDENTS WERE ABLE TO SEE THEIR WORK BETTER USING THE AID PRESCRIBED. FOUR PERCENT THOUGHT THAT THEY POSSIBLY COULD SEE THE WORK BETTER WHILE 13 PERCENT COULD NOT SEE BETTER AT WORK WITH THE AID. HOWEVER, TWO OF THE THREE PERSONS WHO REPORTED THAT THEY RECEIVED NO BENEFIT AT WORK FROM USING THE AID REPORTED THAT THEY USED THE AIDS FOR OTHER TASKS. ONE OF THESE USED THE AID FOR READING AT HOME WHILE THE OTHER WAS AN ALBINO WHO USED HER LIGHT FILTERING LENSES WHILE OUTSIDE. TWO OF THE RESPONDENTS HAD BEEN GIVEN PRESCRIPTIONS FOR OPTICAL AIDS BUT HAD CHOSEN NOT TO GET THE AIDS.

NINETY PERCENT OF THE RESPONDENTS REPORTED THAT THEY USED THEIR EYESIGHT IN DOING THEIR JOBS AND 63 PERCENT WERE MORE COMFORTABLE USING AN AID WHEN WORKING. FORTY-FIVE PERCENT REPORTED THAT THEY COULD WORK FASTER WHEN USING AN AID AND 36 PERCENT THOUGHT THAT THEY MADE FEWER MISTAKES WHEN USING AN AID. SEVENTY-THREE PERCENT REPORTED THAT THEY NEEDED AND USED THE PRESCRIBED AID WHEN DOING THEIR JOBS AND 18 PERCENT THOUGHT THEY MADE MORE MONEY BASED ON PRODUCTION RATES WHEN USING THEIR AIDS.

PAYROLL DATA IS NOW BEING ANALYZED IN ORDER TO DETERMINE WHETHER RECEIVING AN AID DID IN FACT INCREASE THE PRODUCTION RATE. TESTING OF THE SUBJECTS WITH AND WITHOUT THE LOW VISION AID HAS BEEN INITIATED ON A SHORT TERM BASIS TO DETERMINE IF PRODUCTIVITY DOES INCREASE WITH THE USE OF THE AID.

DISCUSSION

THERE ARE LIMITED SERVICES AND FACILITIES IN THE SPECIALIZED AREA OF CARE FOR THE PARTIALLY SIGHTED. MILDER (1980) HAS EMPHASIZED:

> "VISUAL AID CENTERS ARE INADEQUATE IN NUMBERS AND THAT THE DELIVERY OF VISUAL AID SERVICES AND DEVICES IS INADEQUATE IN THE UNITED STATES. THE POTENTIAL FOR ECONOMIC REHABILITATION OF THE PARTIALLY SIGHTED PERSON IS SIGNIFICANT, AND ECONOMICS ARE AS ATTRACTIVE TO THE PARTIALLY SIGHTED AS TO ANYONE ELSE."

IN 1977, AT THE DIRECTION OF ITS LOW VISION ADVISORY COMMITTEE, THE AMERICAN FOUNDATION FOR THE BLIND CONDUCTED A MAIL SURVEY OF ALL IDENTIFIABLE LOW VISION AID CLINICS WHICH WERE DEFINED AS FACILITIES WHERE LOW VISION SERVICES ARE PROVIDED ON A REGULARLY SCHEDULED BASIS. THIS SURVEY UPDATED A 1973 STUDY OF THE NATIONAL SOCIETY TO PREVENT BLINDNESS.

LOW VISION AID CLINICS WERE LOCATED IN 43 STATES. ONLY TWO STATES HAD 10 OR MORE CLINICS: CALIFORNIA, 21 AND NEW YORK, 15. KIRCHNER AND PHILLIPS (1980) GROUPED THE FACILITIES INTO FOUR REGIONS BY FOLLOWING THE U.S. BUREAU OF CENSUS FORMAT. THEY COMPARED THE INCIDENCE RATE OF THE SEVERELY VISUALLY IMPAIRED POPULATION, AS MEASURED BY THE 1977 HEALTH INTERVIEW SURVEY CONDUCTED BY THE NATIONAL CENTER FOR HEALTH STATISTICS, WITH THE LOCATION OF THE FACILITIES IN

EACH OF THE FOUR REGIONS. AS A RESULT OF THIS COMPARISON KIRCHNER AND PHILLIPS (1980) SUGGESTED THAT LOW VISION AID CLINICS WERE UNEVENLY DISTRIBUTED. THE SOUTHERN REGION OF THE U.S. WAS UNDERSERVED WITH 30 PERCENTOF THE CLINICS AND 44 PERCENT OF THE SEVERELY VISUALLY IMPAIRED POPULATION. DIRECTORIES OF LOW VISION AID CLINICS SUCH AS THOSE PUBLISHED BY THE AMERICAN FOUNDATION FOR THE BLIND AND THE NATIONAL SOCIETY TO PREVENT BLINDNESS PROVIDE ADDITIONAL SOURCES OF DOCUMENTATION FOR THE LACK OF COMPREHENSIVE LOW VISION SERVICES THROUGHOUT THE NATION.

BASED ON THE RESULTS OF THIS STUDY AND THE DEGREE OF PROGRESSIVE EYE PATHOLOGY DETECTED, IT IS EVIDENT THAT A LOW VISION AID CLINIC IN A PREVIOUSLY UNDERSERVED AREA WILL REQUIRE MEDICAL EYE DIAGNOSTIC AND TREATMENT CAPABILITY.

RESULTS INDICATE THAT SUBJECTS IN A WORKSHOP SETTING DO PERCEIVE THAT OPTICAL AIDS WILL PROVIDE SIGNIFICANT BENEFIT TO THEM, EITHER BY INCREASING THEIR PRODUCTIVITY OR COMFORT IN DOING THEIR WORK.

THIS STUDY IS CONTINUING AND PRELIMINARY DATA INDICATE THAT OPTICAL AIDS INCREASE THE PRODUCTIVITY OF SOME INDIVIDUALS. HOWEVER, PRODUCTIVITY OVER A LONG-TERM PERIOD IS INFLUENCED BY A NUMBER OF VARIABLES; THEREFORE, A SERIES OF SHORT-TERM TESTS ARE BEING INITIATED TO DETERMINE WHETHER OPTICAL AIDS INFLUENCE THE SHORT-TERM PRODUCTIVITY OF WORKERS.

IN ADDITION, A STUDY OF PARTIALLY SIGHTED SUBJECTS WHO ARE EITHER EMPLOYED IN COMPETITIVE WORK OR MAY POTENTIALLY BE EMPLOYED IN COM-

PETITIVE JOBS IS BEING CONDUCTED TO DETERMINE IF LOW VISION AIDS WILL ASSIST IN ECONOMIC REHABILITATION.

CONCLUSIONS

In summary, the studies described in this report indicate:

1. There is a need for closer medical follow-up of the visually impaired population.
2. The low vision aid should be job-specific and subject-specific.
3. Low vision aids can enhance employment.

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RESPONSE TO
THE LOW VISION CLINIC
AS AN EMPLOYMENT ENHANCEMENT TECHNIQUE

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THIS PRESENTATION IS AN EXCELLENT EXAMPLE OF THE TYPE OF RESEARCH THAT CAN BE EASILY USED WITHIN THE "BLINDNESS SYSTEM." THE REHABILITATION FIELD NEEDS TO PLACE MORE EMPHASIS ON THIS TYPE OF SPECIFIC AND OPERATIONAL RESEARCH. ONE OF THE KEY FINDINGS AND AREAS FOR FURTHER RESEARCH WAS THE SIGNIFICANT DIFFERENCE IN PRODUCTIVITY IMPROVEMENT DEPENDING ON TYPE OF JOB, STABILITY OF VISION, TYPE OF VISION, AND MOTIVATION.

IT IS CLEAR THAT LOW VISION SERVICES CAN IMPROVE THE VARIOUS LIFE ACTIVITIES OF MANY BLIND AND VISUALLY IMPAIRED INDIVIDUALS. IT IS LIKEWISE CLEAR THAT THEY ARE NOT A PANACEA. THE TECHNOLOGY OF KNOWLEDGE ABOUT LOW VISION SERVICES HAS SUBSTANTIALLY EVOLVED IN THE LAST FEW YEARS. HOWEVER A SYSTEMATIC AND APPROPRIATE UTILIZATION OF LOW VISION SERVICES THROUGHOUT OUR PROGRAMS HAS NOT BEEN DEVELOPED IN MANY INSTANCES.

THIS RESEARCH HAS IMPLICATIONS FOR ACTIVITY AT BOTH THE NATIONAL AND LOCAL LEVEL. AT THE NATIONAL LEVEL, THERE SHOULD BE INCREASED EMPHASIS OF FUNCTIONAL AND OUTCOME ORIENTED LOW VISION RESEARCH. THIS RESEARCH SHOULD FOCUS ON BOTH THE POTENTIAL AND THE PRACTICAL USES OF LOW VISION SERVICES. INFORMATION DISSEMINATION AND TRAINING SHOULD BE PROVIDED THAT WILL FACILITATE THE APPROPRIATE IMPLEMENTATION OF LOW VISION SERVICES THROUGHOUT OUR PROGRAMS. THERE IS SUFFICIENT NEED IN THIS AREA TO JUSTIFY SUBSTANTIALLY INCREASED FUNDING FOR RESEARCH AND TRAINING PROGRAMS.

AT THE LOCAL LEVEL, IT IS IMPORTANT THAT LOW VISION SERVICES NOT BE CONSIDERED AS A SEPARATE EYE CARE OPTION THAT IS USED FOR SOME PEOPLE. IT SHOULD BE CONSIDERED AN APPROACH OR SYSTEM OF SERVICES THAT PERMEATES ALL ASPECTS OF OUR PROGRAMS. AS LOW VISION SERVICES ARE

REVIEWED AT THE LOCAL LEVEL, I BELIEVE YOU NEED TO ASK YOURSELF THE FOLLOWING QUESTIONS:

- DO YOU HAVE ADEQUATE AND ACCESSIBLE LOW VISION SERVICES?
- DO ALL OF YOUR STAFF UNDERSTAND THE USE OF LOW VISION WITHIN THEIR ACTIVITY?
- IS THERE ADEQUATE TRAINING ON LOW VISION PROVIDED TO YOUR STAFF AND OTHER INTERESTED GROUPS SUCH AS CONSUMERS?
- DOES YOUR AGENCY HAVE A POLICY ON WHEN REFERRALS FOR LOW VISION SERVICES ARE MADE?
- DOES YOUR AGENCY HAVE A POLICY ON WHEN YOU ORIENT CLIENTS TO LOW VISION SERVICES?
- DO YOUR CLIENT DIAGNOSTIC AND PLANNING DOCUMENTS FACILITATE THE USE OF LOW VISION SERVICES?
- DO YOUR LESSON PLANS AND CURRICULUM REFLECT CURRENT LOW VISION KNOWLEDGE?
- ARE YOU WORKING TO DEVELOP MULTIPLE FUNDING SOURCES FOR LOW VISION SERVICES, E.G. MEDICAID, MEDICARE, VOCATIONAL REHABILITATION.
- ARE PEOPLE AWARE OF OTHER WAYS TO REDUCE COSTS, SUCH AS TAX DEDUCTIONS.

IN SUMMARY, THE POTENTIAL BENEFIT OF LOW VISION SERVICES DEMANDS THAT ALL PERSONS IN THE BLINDNESS SYSTEM BECOME TRAINED IN AND MAINTAIN AN AWARENESS OF LOW VISION SERVICES.

CAREER DEVELOPMENT NEEDS OF BLIND AND VISUALLY IMPAIRED PERSONS AND CAREER DEVELOPMENT SERVICE RESOURCES

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For over forty years, career development theorists have been attempting to determine which clients could benefit from or need different kinds of career development services. Research suggests that gender differences influence the outcome of career interventions (Power, et al., 1979, Fretz & Long, 1982). Age might also affect the outcome of career development interventions. For example, Krumboltz, et al., (1982) Report older males made poorer simulated career choices than females and younger males after receiving rational decision making training. These kinds of results are not unanticipated, for sociology has shown us that life experiences are different for women, blacks and other ethnic groups, lower and upper classes, and disabled persons. While it is clear that disability brings with it different kinds of life experiences, it is not clear that the career development process is differentially affected by the life experiences accompanying disability.

The effect on an individual's career development of limiting career opportunities because of disability-related factors is unknown. Some work has been done which investigates the career development or vocational adjustment needs of disabled groups other than blind and severely visually impaired persons (see Vandergoot and Worral, 1982; and Bolton, 1982).

The career development intervention model developed by the Research and Training Center links Havighurst's career development model (1964) and career services in a way that will enable researchers t investigate the effects of severe visual impairment on career development. The proposed model is very straight-forward. Career services,

SITE OF SERVICE DELIVERY, AND EMPLOYMENT OUTCOME ARE ARRANGED ON A CUBE THAT CLEARLY DELINEATES POSSIBLE COMBINATIONS OF SERVICES, SITES, AND OUTCOMES. THIS MODEL OF INTERVENTIONS CAN FUNCTION WITHIN ANY ONE OF HAVINGHURST'S SIX STAGES OF CAREER DEVELOPMENT.

CAREER DEVELOPMENT NEEDS AND RESOURCES SURVEY

HOLLAND, MAGOON, AND SPOKANE (1981) STATE THAT MULTIPLE EVALUATIONS OF CAREER INTERVENTIONS FOR SIGHTED PERSONS HAVE REPORTED POSITIVE OUTCOMES. EXTENSIONS OF THESE FINDINGS FOR BLIND AND VISUALLY IMPAIRED PERSONS MAY NOT BE WARRANTED. AS IT HAS BEEN SUGGESTED BY PHILLIPS ET AL. (1983) ONE CAN NOT COMPARE THE CAREER DEVELOPMENT OF SPECIAL NEEDS POPULATIONS WITH THE CAREER DEVELOPMENT OF THE SIGHTED POPULATION. APPLICATION OF CAREER INTERVENTIONS BASED ON THE NEEDS OF SIGHTED PERSONS MAY LEAD TO INACCURATE CONCLUSIONS ABOUT BOTH THE EFFECTIVENESS OF THE INTERVENTION AND OF THE CAREER DEVELOPMENT NEEDS OF BLIND PERSONS. PHILLIPS ET AL. (1983) CALL FOR THE DEVELOPMENT OF BASE LINE DATA POOLS FOCUSING ON THE CAREER DEVELOPMENT OF SPECIAL NEEDS POPULATIONS INCLUDING BLIND AND VISUALLY IMPAIRED PERSONS.

TO BEGIN THE DEVELOPMENT OF BASE LINE DATA POOL, THE REHABILITATION RESEARCH AND TRAINING CENTER SURVEYED THE CAREER DEVELOPMENT NEEDS OF BLIND AND SEVERELY VISUALLY IMPAIRED ADULTS AND CHILDREN. TO ASSESS THE PERCEPTIONS OF THE CAREER DEVELOPMENT NEEDS OF THIS POPULATION; PARENTS, TEACHERS, AND REHABILITATION COUNSELORS WERE ALSO SURVEYED. PRIVATE AND PUBLIC REHABILITATION AGENCIES WERE ALSO ASKED ABOUT THE CAREER DEVELOPMENT NEEDS OF THIS POPULATION AS WELL AS ASKED ABOUT THE RESOURCES AVAILABLE TO MEET THE NEEDS OF THEIR CLIENTELE.

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METHODOLOGY

THE FIRST PHASE OF THIS STUDY INVOLVED SURVEYING TEACHERS, VISUALLY IMPAIRED STUDENTS AND THEIR PARENTS. STUDENTS AND TEACHERS IN BOTH RESIDENTIAL AND PUBLIC SCHOOLS WERE SURVEYED. STUDENTS FROM GRADES 3, 6, 9 AND TEACHERS FROM GRADES K, 3, 6, 9, AND 12 WERE SELECTED. THE 1982 FEDERAL QUOTA REGISTRATION LIST WAS USED TO DETERMINE PROPORTIONS OF STUDENTS IN EACH STATE, GRADE AND TYPE OF SCHOOL. SAMPLING WAS THEN BASED UPON THESE PROPORTIONS.

THE SECOND PHASE OF THE SURVEY INVOLVED REHABILITATION PROFESSIONALS AND ADULT BLIND AND VISUALLY IMPAIRED PERSONS. ADULT CONSUMERS WERE IDENTIFIED AND ACCESSED THROUGH THE NATIONAL OFFICE OF THE AMERICAN COUNCIL OF THE BLIND. IN SELECTING PUBLIC AND PRIVATE REHABILITATION AGENCIES, AN ATTEMPT WAS MADE TO OBTAIN SAMPLES FROM THE SAME STATES AND IN LIKE PROPORTIONS AS THE STUDENT SAMPLE.

A MAIL SURVEY INSTRUMENT WAS USED TO COLLECT THE CAREER DEVELOPMENT NEEDS AND RESOURCES DATA. THE SURVEY INSTRUMENTS WERE ADAPTED FROM THE WISCONSIN CAREER EDUCATION NEEDS ASSESSMENT AND SURVEY OF RESOURCES HANDBOOK. THIS HANDBOOK CONTAINS 21 INSTRUMENTS THAT ASSESS THE CAREER DEVELOPMENT NEEDS OF PRE-SCHOOL THROUGH RETIREMENT PERSONS.

RESULTS

CAREER DEVELOPMENT ACTIVITIES IN SCHOOLS AND REHABILITATION AGENCIES APPEAR TO BE PROVIDED TO THE CLIENTELE OF THESE SCHOOLS AND AGENCIES WITH LESS FREQUENCY THAN THE PROVIDERS OR POTENTIAL SERVICE CONSUMERS STATE IS NEEDED. THURMAN (1983) STATES THAT AMONG THE CONSEQUENCES FOR THIS STATE OF AFFAIRS IS CONTINUED HIGH RATES OF UNDEREMPLOYMENT AND UNEMPLOYMENT AMONG BLIND AND VISUALLY IMPAIRED PEOPLE.

THE NEED FOR SELF-UNDERSTANDING OR SELF-AWARENESS WAS INCLUDED IN THE SURVEY FORMS FOR EACH OF THE GRADE LEVELS (3,6,9,12). IT IS THROUGH SELF-UNDERSTANDING THAT ONE CAN BECOME INVOLVED IN THE CRITICAL SEQUENTIAL PROCESS OF SELF-EVALUATION UPON WHICH CHOICES ARE MADE (KIRKMAN, 1983). THE EXTENT OF THIS NEED WAS EXPRESSED AT ITS HIGHEST LEVEL IN GRADES 3 AND 6. IT WAS MET BY THE SCHOOLS AT ABOUT THE SAME FREQUENCY IN GRADES 6, 9, AND 12. TEACHERS, BOTH KINDERGARTEN AND GRADES 3-12, PERCEIVED THESE NEEDS AMONG THE MOST IMPORTANT CAREER DEVELOPMENT NEEDS. THEY REPORTED THAT THEIR CIRCUMSTANCES PERMITTED THEM TO MEET THIS NEED AT A RATE SLIGHTLY HIGHER THAN THE STUDENTS PERCEIVED THE NEED AS BEING MET.

UNDERSTANDING THE WORLD OF WORK IS A CAREER DEVELOPMENT NEED ALSO INCLUDED IN THE SURVEY. THE YOUNGER CHILDREN (GRADES 3 AND 6) APPEARED TO EXPRESS GREATER NEED FOR UNDERSTANDING THE WORLD OF WORK ACTIVITIES THAN DID THE STUDENTS IN GRADES 9 AND 12. THE YOUNGER GROUP ALSO REPORTED THE SCHOOLS TO BE MEETING THESE NEEDS AT A MORE FREQUENT RATE THAN THE OLDER STUDENTS. THE TEACHER GROUP REPORTED THIS NEED TO BE OF MEDIUM IMPORTANCE, BUT NOT QUITE AS IMPORTANT AS THE NEED FOR SELF-UNDERSTANDING. KINDERGARTEN TEACHERS REPORTED MEETING THIS NEED FREQUENTLY WHILE TEACHERS IN THE OTHER GRADES REPORTED IT TO BE MET ONLY SLIGHTLY BETTER THAN OCCASIONALLY. THE DIFFERENCE IN MEETING THE NEED BETWEEN THE TEACHER GROUPS LIKELY REFLECTS THE DIFFERENCES BETWEEN THE ACTIVITIES DESCRIBED FOR THE TWO GROUPS. OF MORE CRITICAL CONCERN IS WHY TEACHERS (3-12) WOULD PLACE LESS VALUE ON THESE ACTIVITIES THAN THE KINDERGARTEN TEACHERS. TEACHERS (3-12) MAY PLACE LESSER VALUE ON THESE ACTIVITIES BECAUSE OF LESS EXPERIENCE AND

KNOWLEDGE IN THIS AREA. THE TEACHERS STATE THAT THEIR PROFESSIONAL EDUCATION NEEDS FOR SKILLS AND UNDERSTANDING OF THE CAREER DEVELOPMENT NEEDS OF BLIND AND VISUALLY IMPAIRED CHILDREN ARE BEING MET ONLY OCCASIONALLY.

CAREER EXPLORATION, DECISION MAKING, AND PLANNING NEEDS WERE REPORTED IN WAYS WHICH APPEAR TO BE CONTRARY [SUBJECT TO REVISION ON FURTHER ANALYSIS] TO CAREER DEVELOPMENT THEORY OF NON-SPECIAL NEEDS POPULATIONS. THE HIGHEST LEVEL OF CAREER EXPLORATION NEED EXPRESSED BY THE BLIND AND VISUALLY IMPAIRED STUDENTS SURVEYED WERE THE SIXTH GRADERS, FOLLOWED BY THE NINTH GRADERS, AND THEN THE TWELFTH GRADERS. THE SIXTH GRADERS ALSO REPORTED THESE NEEDS BEING MET BY THE SCHOOL LESS OFTEN THAN EITHER NINTH OR TWELFTH GRADERS. TEACHERS (3-12) EVALUATED THIS NEED IN THE MEDIUM HIGH RANGE AND REPORTED IT TO BE MET ONLY OCCASIONALLY BY THE SCHOOLS. SIGNIFICANTLY THOSE ITEMS INVOLVING TRY-OUTS IN WORK SETTINGS WERE PERCEIVED AS BEING MET EVEN LESS FREQUENTLY THAN OCCASIONALLY.

CAREER PREPARATION AND PLACEMENT NEEDS WERE PERCEIVED BY NINTH GRADERS AS A HIGHER ORDER NEED THAN DID THE TWELFTH GRADERS. BOTH GROUPS REPORTED THE NEED BEING MET AT APPROXIMATELY THE SAME RATE; MORE FREQUENTLY THAN OCCASIONALLY, BUT LESS OFTEN THAN FREQUENTLY. TEACHERS (3-12) PERCEIVED THE NEED TO BE SLIGHTLY MORE IMPORTANT THAN DID EITHER GROUP OF STUDENTS AND TO BE MET LESS FREQUENTLY THAN DID THE STUDENTS.

CONCLUSIONS

FROM A PRELIMINARY ANALYSIS OF PORTIONS OF THE DATA COLLECTED FROM THIS SURVEY, THE FOLLOWING CONCLUSIONS SEEM WARRANTED. IT MUST BE NOTED, HOWEVER, THAT THE FOLLOWING CONCLUSIONS ARE TENTATIVE AND SUBJECT TO REVISION ON FURTHER ANALYSES OF THE SURVEY DATA.

1. THE CAREER DEVELOPMENT NEEDS OF BLIND AND VISUALLY IMPAIRED YOUTH APPEAR TO BE NEEDS WHICH ARE OF RELATIVE HIGH INTENSITY.
2. THE CAREER DEVELOPMENT NEEDS OF BLIND AND VISUALLY IMPAIRED YOUTH APPEAR TO BE MET ONLY OCCASIONALLY BY SCHOOLS.
3. AS THE CAREER DEVELOPMENT SERVICE NEEDS BECOME MORE OCCUPATIONALLY SPECIFIC, THE STUDENTS EXPRESSED HIGHER LEVELS OF NEED AND LOWER RATES OF RECEIPT OF SERVICES.
4. PROVIDER GROUPS DIFFERED IN THE IMPORTANCE OF THE CAREER DEVELOPMENT NEEDS BLIND AND VISUALLY IMPAIRED PERSONS.
5. THE PROVIDER GROUPS AGREED THAT THE NEED FOR CAREER DEVELOPMENT SERVICES AMONG BLIND AND VISUALLY IMPAIRED PERSONS EXCEEDED THE AVAILABILITY OF OR FREQUENCY WITH WHICH THE SERVICES ARE GENERALLY PROVIDED TO THIS POPULATION.
6. THE NEEDS OF PROVIDERS FOR CAREER SERVICES TO FACILITATE THE CAREER DEVELOPMENT OF BLIND AND VISUALLY IMPAIRED PEOPLE EXCEEDS THE AVAILABILITY OF SUCH SERVICES.
7. AS THE NEEDS OF THE PROVIDERS OF CAREER SERVICES TO BE USED WITH THEIR CLIENTELE BECAME MORE OCCUPATIONALLY SPECIFIC, THE NEED FOR THE SERVICE INCREASED AND THE FREQUENCY OR ACCESSIBILITY OF THE CAREER SERVICE DECREASED.

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RESPONSE TO
CAREER DEVELOPMENT NEEDS OF BLIND AND VISUALLY IMPAIRED PERSONS AND CAREER DEVELOPMENT SERVICE RESOURCES

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How CAN WE WORK TOGETHER IN ORDER TO PROVIDE A CONTINUUM OF SERVICES TO OUR VISUALLY HANDICAPPED CHILDREN AND ADULT CLIENTS? WHO SHOULD PROVIDE WHAT? BUCK PASSING IS ALMOST AN AVOCATION IN THE BLINDNESS FIELD. VISUALLY HANDICAPPED TEACHERS ARE NOT GUIDANCE OR VOCATIONAL COUNSELORS -- GUIDANCE COUNSELORS DON'T UNDERSTAND THE NEEDS OF THE BLIND -- VOCATIONAL GUIDANCE COUNSELORS CAN'T WORK WITH POORLY TRAINED CLIENTS -- VISUALLY HANDICAPPED TEACHERS ARE TOO BUSY WITH ACADEMICS TO TEACH ADL AND COMMUNICATION SKILLS, ETC. OUR FIELD SOMETIMES SEEMS TO BE A NEVER ENDING CIRCLE OF "ITS NOT MY JOB" TYPE RESPONSES. PERHAPS THE REASON FOR THIS IS WE HAVE SPECIALIZED OURSELVES OUT OF THE MARKET. LET'S BLAME THAT ON THE TRAINING SYSTEM, IT IS FAR MORE COMFORTABLE! PERHAPS ANOTHER REASON FOR THE MANY SOCIALLY INEPT CLIENTS/STUDENTS WE FIND TODAY IS DUE TO OUR NEED TO TAKE THE CONCEPT OF INTEGRATION/MAINSTREAMING TOO LITERALLY. IF WE BELIEVE VISUALLY HANDICAPPED AND BLIND STUDENTS HAVE SPECIAL UNIQUE NEEDS AND THAT THEY SHOULD WORK WITH THEIR SIGHTED PEERS AND ACCOMPLISH ALL THOSE SCHOOL REQUIREMENTS AS WELL, ON AN EQUAL BASIS, HOW CAN WE POSSIBLY BE SURPRISED THAT THE MAJORITY OF VISUALLY HANDICAPPED STUDENTS NEED MORE TRAINING TIME THAN THE STANDARD SCHOOL CALENDAR YEAR AND THE STANDARD GRADES K-12 LEARNING EXPERIENCE? CONTRARY TO SOCIETY'S POPULAR BELIEF, NOT EVERY VISUALLY HANDICAPPED PERSON IS GIFTED AND TALENTED. UNIQUE NEEDS MEANS EXTRA TRAINING AND ADDITIONAL TIME FOR THIS TO HAPPEN - SUMMERS OR A THIRTEENTH YEAR ARE POSSIBILITIES.

SPEAKING OF TRAINING LET'S LOOK AT OUR SPECIALIZED TRAINING PROGRAMS IN THE FIELD OF PERSONNEL PREPARATION -- WE HAVE TRAINED TEACHERS OF THE VISUALLY HANDICAPPED AT THE BACHELORS, MASTERS AND

DOCTORAL LEVELS, WE HAVE REHABILITATION TEACHERS AT THE BACHELORS AND MASTERS LEVELS AND WE HAVE ORIENTATION AND MOBILITY INSTRUCTORS AT THE BACHELORS, MASTERS AND DOCTORAL LEVELS. OVER THE PAST TWENTY-FIVE YEARS WE HAVE BECOME HIGHLY PROFESSIONAL -- HIGHLY SKILLED -- HIGHLY SPECIALIZED, AND VERY EXPENSIVE. ESPECIALLY SO WHEN WE CONSIDER WE ARE WORKING WITH THE LOWEST INCIDENCE POPULATION OF HANDICAPPED PEOPLE SCATTERED OVER A LARGE GEOGRAPHIC AREA. CAN AGENCIES AFFORD ALL OUR SPECIALTIES? CAN WE?

LET'S BEGIN THE "HOW CAN WE...?" LIST WITH TRAINING PROGRAMS. FIRST AND FOREMOST, WE MUST CONTINUE TO DEVELOP MORE MULTICOMPETENTLY TRAINED PEOPLE. WE ARE TOO SMALL A FIELD AND POPULATION TO DIVIDE THE NEEDS OF BLIND PEOPLE AMONG SO MANY SPECIALIZED PROFESSIONS. WE NEED DUALLY CERTIFIED PEOPLE IN A VARTIETY OF WAYS. WE ALREADY HAVE THREE MODELS: ORIENTATION AND MOBILITY/VISUALLY HANDICAPPED; UISUALLY HANDICAPPED/PRESCHOOL; AND DEAF AND BLIND. WE NEED TO CONSIDER ANOTHER DUAL TRAINING AREA -- REHABILITATION AND ORIENTATION AND MOBILITY. REGARDLESS, ALL TRAINING MUST SERIOUSLY INTEGRATE AND EMPHASIZE LOW VISION AND THE MULTIPLY IMPAIRED.

LET'S NEXT LOOK AT PROGRAM PLANNING. THE IEP SHOULD BEGIN AT BIRTH OR AGE OF ONSET WITH BOTH REHABILITATION AND EDUCATION DRAWING IT UP TOGETHER WITH THE PARENT OR BLIND CONSUMER THEMSELVES AS THE CASE MANAGER. IT SHOULD BE A LIFE LONG PLAN WITH THE CONCEPT OF CLOSURE DETERMINED BY THE CLIENT - NOT THE BLINDNESS SYSTEM. AFTER HIGH SCHOOL OR THE ACQUISITION OF MEASUREABLE MUTUALLY AGREED UPON GOALS, ADDITIONAL COUNSELING AND/OR SKILL DEVELOPMENT AREAS SHOULD BE AVAILABLE AT COST (A SLIDING SCALE) TO THE BLIND PERSON. EARLY INTERVENTION IS THE KEY USING A MULTIDISCIPLINARY APPROACH AND EVENTUALLY

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PLACING THE SUCCESS AND DIRECTION OF THE CAREER DEVELOPMENT PROCESS IN THE HANDS OF THE CONSUMER.

HOWEVER, BEFORE ANY OF THIS CAN HAPPEN WE AS A FIELD MUST:

1. DEAL WITH OUR OWN ATTITUDES TOWARD THE BLIND AND VISUALLY HANDICAPPED PERSON HONESTLY.
2. COME TO GRIPS WITH THE GROWING GENERIC MODELS BOTH IN TRAINING, SERVICE DELIVERY AND FUNDING PATTERNS.
3. BE OPEN TO NEW IDEAS FROM ALL PROFESSIONS BUT, MOST IMPORTANTLY, FROM THE BLIND INDIVIDUAL, HIMSELF, WHO MUST BE ALLOWED THE DIGNITY OF CHOICE, FAILURE, AND SUCCESS OF HIS OR HER OWN MAKING.

WHEN AND ONLY WHEN THIS TAKES PLACE WILL WE FEEL COMFORTABLE AND SECURE ENOUGH PROFESSIONALLY TO START WORKING TOGETHER AS A PROFESSION CONCERNED MORE FOR OUR CLIENTS THAN OUR OWN TURFDOM AND MISPLACED LOYALTY DIRECTED TOWARD A NEED FOR SEPARATISM AND SO CALLED PROFESSIONAL IDENTITY.

FUNDING TECHNOLOGICAL ADVANCES

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There are two dreams in American society: one dream thrives on competitions and the free enterprise system; the other dream thrives on cooperation, and takes place in the public sector. The strength of fabric of American Society has always been the ability to support two dreams. Those of us who are managers in the public sector have become caretakers of the second dream, and the job of caretaker is getting more and more difficult. We have less people, less money, less time and less patience and more demands. Such an environment puts tremendous strain and stress on us as public managers. We owe it to ourselves to relieve some of that strain and to tap one another for resources that we need but can't get. One of the ways to do this is through fund raising.

What I would like to discuss this morning is some of the ways in which technological advances can be financed through the private sector as well as the government sector. Some of the topics to be covered include:

I. Fears Associated with Fundraising
II. Values Clarification
III. The Importance of Your Ideas
IV. Evaluating Your Idea
V. Questions and Answers in Conducting A Search
VI. A Geographic Search In Mississippi
VII. The Proposal
VIII. Additional Resources

GETTING OVER THE FEAR OF ASKING IS PARAMOUNT IF YOU ARE GOING TO BE A SUCCESSFUL FUNDRAISER. SINCE TALKING ABOUT MONEY IN OUR SOCIETY IS GENERALLY CONSIDERED ILL MANNERED, GETTING COMFORTABLE WITH MONEY TAKES SOME PRACTICE. THE GRASSROOTS FUNDRAISING JOURNAL (APRIL '83) LISTS SOME COMMON FEARS. LOOSELY PARAPHRASED THEY INCLUDE:

1. FEAR OF REFUSAL
2. FEAR OF REPRISAL
3. FEAR OF RESENTMENT
4. FEAR OF LOST FRIENDSHIPS
5. FEAR OF BEING MISUNDERSTOOD
6. GUILT ABOUT YOUR CAUSE'S WORTH COMPARED TO THAT OF OTHERS.
7. FEAR OF INSUFFICIENT INFORMATION.

THE PARTICULAR FEAR YOU MAY HAVE REGARDING FUND RAISING IS NOT AS IMPORTANT AS WHETHER OR NOT YOU RESOLVE THAT FEAR. BECAUSE IF YOU ARE NOT SUCCESSFUL IN RESOLVING IT THEN IT WILL AFFECT YOUR CONFIDENCE, AND YOUR PERSISTANCE AS A FUNDRAISER.

ANOTHER WAY OF REACHING YOUR FEELINGS ABOUT ASKING FOR MONEY IS THROUGH VALUE CLARIFICATION. ASK YOURSELF THREE QUESTIONS: UNDER WHAT SITUATION WOULD YOU GRANT SOMEONE $10,000., $50,000. AND $100,000? WHAT WOULD THEY HAVE TO ACHIEVE IN ORDER FOR YOU TO COMPLY WITH EACH REQUEST? THEN ASK THE PERSON SITTING NEXT TO YOU THE SAME QUESTION. THE ANSWERS TO THESE QUESTIONS ARE IMPORTANT BECAUSE THEY WILL NOT BE TOO DISSIMILAR FROM THE EXPECTATIONS OF INDIVIDUALS WEIGHING YOUR REQUEST FOR FUNDS.

ONCE YOU HAVE CONQUERED THE FEAR OF ASKING AND DONE SOME VALUES CLARIFICATION YOU ARE READY TO CONSIDER YOUR IDEAS. FIRST CHECK YOUR IDEAS FOR THE IMAGINATION FACTOR. IN THE FIELD OF MARKETING ONE OF

THE MORE COMPELLING TOOLS USED TO PRODUCE SALES IS IMAGINATION.

VERY LITTLE IS SOLD IN THE COUNTRY TODAY UNLESS IT CAPTURES THE IMAGINATION OF THE PUBLIC.

SECOND: YOUR IDEA SHOULD BE EXPLICIT AND PERSUASIVE. PEOPLE SHOULD BE ABLE TO COMPREHEND WHAT IT IS THAT YOU ARE ATTEMPTING TO DO AND BE CONVINCED THAT WHAT YOU WANT TO DO NEEDS TO BE DONE.

THIRD: WHAT IS THE COST BENEFIT TO YOUR IDEA? WHEN YOU ARE FINISHED WILL YOU HAVE SAVED MONEY OR TIME OR RESOURCES?

FOURTH: IS YOUR IDEA SELF-SUPPORTING?

ONCE YOU ARE CONFIDENT THAT YOU HAVE A GOOD IDEA THEN EVALUATE YOUR IDEA FURTHER. WHY IS IT A GOOD IDEA? IS IT A GOOD IDEA BECAUSE OF ITS SCOPE? ITS VISIBILITY? IS YOUR IDEA A PROTOTYPE? DOES IT EXPRESS CURRENT INTEREST? WILL IT MAKE A SIGNIFICANT CONTRIBUTION? DOES IT OFFER A SOLUTION TO A PROBLEM? CAN YOU OFFER A LARGE NETWORK TO ACCOMPLISH YOUR IDEA? DOES THE IDEA HAVE MANY APPLICATIONS?

ARMED WITH AN IDEA AND CONFIDENT THAT IT IS A GOOD IDEA YOU ARE PREPARED TO BEGIN A SEARCH FOR POTENTIAL GOVERNMENT ENTITIES OR FOUNDATIONS THAT MIGHT BE INTERESTED IN FINANCING YOUR IDEA.

<u>FOUNDATION FUNDAMENTALS</u> LISTS SOME QUESTIONS TO ASK AS YOU BEGIN YOUR SEARCH:

1. HAS THE FOUNDATION/GOVERNMENT ENTITY DEMONSTRATED A COMMITMENT TO FUNDING YOUR PARTICULAR SUBJECT AREA?
2. IS IT LIKELY THAT THE FOUNDATION WILL MAKE GRANTS TO RECIPIENTS IN YOUR GEOGRAPHIC AREA?
3. DOES THE AMOUNT OF MONEY YOU ARE REQUESTING FIT THE FOUNDATION'S GRANT RANGE?

4. Does the foundation have any policy prohibiting grants for the support you are looking for?

5. Does the foundation like to make grants to cover the full costs of a project where other foundations share the costs?

6. For what period does the foundation generally make grants?

7. What type of organization does the foundation usually support?

Answering these questions before you approach a foundation or government entity for support will protect you from needless expenditure of time and effort. Getting the answers to these questions is probably the most time consuming part of the process.

The Federal Government offers the most comprehensive data on priorities for funding. The Federal Register publishes grant notices, objectives, and standards for funding prior to grant awards. Thus they offer the most complete information on program objectives. Large foundations publish Annual Reports and describe their funding priorities, but often the Annual Reports are purposely vague to encourage flexibility. Thus the best information on large foundations can be found in a volume entitled Source Book Profiles which details the giving record of the top 1000 foundations in the country. Information on small foundations can usually be obtained from community leaders, local newspapers and the National Data Book.

The best source of information on corporate foundations is the executive officer in the company assigned responsibility for the foundation's work.

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THE FEDERAL GOVERNMENT USUALLY FUNDS PROJECTS OF A NATIONAL SCOPE. LARGE FOUNDATIONS GENERALLY FUND PROJECTS OF A NATIONAL OR EVEN INTERNATIONAL SCOPE. SMALLER FOUNDATIONS CONCENTRATE ON LOCAL COMMUNITIES, HOME STATES AND GEOGRAPHIC REGION. CORPORATE FOUNDATIONS LIMIT THEIR GIVING TO THE CITIES AND TOWNS IN WHICH THEY HAVE DISTRICT OFFICES.

THE FEDERAL GOVERNMENT DISTRIBUTES THE LARGEST AMOUNT OF GRANTS EACH YEAR. LARGE FOUNDATIONS DISTRIBUTE THE NEXT LARGEST AMOUNT FOLLOWED BY CORPORATE FOUNDATIONS. SMALL FOUNDATIONS PROVIDE THE SMALLEST GRANTS USUALLY RANGING FROM A FEW HUNDRED DOLLARS TO A CEILING AROUND $15,000.

IN CONDUCTING A FOUNDATION SEARCH YOU CAN START WITH A GEORGRAPHIC AREA OR A SUBJECT AREA. IF WE WERE LOOKING FOR FUNDING FOR TECHNOLOGICAL DEVICES IN MISSISSIPPI IT MIGHT BE EASIER TO BEGIN WITH GEOGRAPHY SINCE IT'S A FAIRLY SMALL STATE.

ONE WOULD BEGIN BY GOING TO THE FOUNDATION LIBRARY IN JACKSON, MISSISSIPPI AND REQUESTING A COPY OF THE FOUNDATION DIRECTORY. THE FOUNDATION DIRECTORY DESCRIBES THE ASSETS OF THE LARGEST FOUNDATIONS IN THE COUNTRY. THE 4000 FOUNDATIONS LISTED EACH HAVE ASSETS IN EXCESS OF ONE MILLION OR MORE.

THE QUESTION: ARE THERE ANY LARGE FOUNDATIONS LOCATED IN MISSISSIPPI?

ANSWER: THERE ARE SEVERAL FOUNDATIONS IN MISSISSIPPI.

QUESTION: WHAT ARE THEY?

ANSWER: 1. CHISHOLM FOUNDATION (LAUREL)
2. COMMUNITY FOUNDATION INC. (JACKSON)
3. DAY TRUST (YAZOO CITY)
4. DEPOSIT GUARANTY TRUST (JACKSON)
5. FIELD COOPERATIVE ASSOCIATION, INC. (JACKSON)
6. FIRST MISSISSIPPI CORPORATION (JACKSON)
7. HARDIN FOUNDATION (MERIDIAN)

QUESTION: WHY WERE THEY SET UP?

ANSWER: MOST WERE ESTABLISHED TO AID HIGHER EDUCATION IN THE STATE. THERE IS A STRONG PATTERN OF GIVING TO PROTESTANT EDUCATION. A FEW FOUNDATIONS ALSO DIVERSIFY THEIR GIVING BY CONTRIBUTING TO COMMUNITY SERVICE.

QUESTION: WHERE WOULD I FIND MORE DETAILED INFORMATION ON THESE SEVEN FOUNDATIONS?

ANSWER: FOUNDATIONS GRANTS INDEX DETAILS THE ACTUAL PATTERN OF GIVING TO THE TOP 450 FOUNDATIONS.

QUESTION: ARE ANY OF THE MISSISSIPPI FOUNDATIONS IN THE TOP 450?

ANSWER: THE HARDIN FOUNDATION IS LISTED.

QUESTION: WHAT IS THE PROFILE OF THE HARDIN FOUNDATION:

ANSWER: THE HARDIN FOUNDATION, GRANTS TO EDUCATION PROJECTS IN MISSISSIPPI.

$12,000 - ALL SAINTS EPISOCOPAL SCHOOL
$ 5,000 - AMERICAN JEWISH ARCHIVES
$ 8,000 - BOARD OF STATE INSTITUTE FOR HIGHER LEARNING
$14,000 - CHILDREN'S CENTER (EARLY CHILDHOOD ED. PROJECT)
$25,000 - CREATE (CHALLENGE GRANT FOR PUBLIC SCHOOL READING)
$15,000 - MCCOMB MUNICIPALSEPARATE SCHOOL DISTRICT
$ 7,200 - MERIDIAN JUNIOR COLLEGE
$50,000 - MISSISSIPPI AUTHORITY FOR EDUCATIONAL T.V.
$50,000 - MISSISSIPPI COLLEGE
$ 9,288 - MISSISSIPPI COMMITTEE FOR HUMANITIES CARD XII
$ 5,500 - MISSISSIPPI FOUNDATION FOR INDEPENDENT COLLEGES
$ 8,845 - TOUGULOO COLLEGE
$ 9,936 - WOOD JR. COLLEGE

QUESTION: SINCE THE OTHER FOUNDATIONS ARE NOT LISTED IN THE FOUNDATION GRANTS INDEX, WHERE COULD I GET DETAILED INFORMATION ON THEIR TRACK RECORD?

ANSWER: YOU CAN REQUEST THEIR ANNUAL REPORT: CALL THEM OR REQUEST A COPY OF THEIR 990PF FROM IRS.

QUESTION: WHAT ABOUT THE SMALLER FOUNDATIONS IN MISSISSIPPI? WHERE WOULD I FIND THEM?

ANSWER: THE NATIONAL DATA BOOK LISTS ALL 22,000 FOUNDATIONS PRESENTLY OPERATIVE IN THE UNITED STATES.

QUESTION: ARE THERE ANY SMALL FOUNDATIONS IN MISSISSIPPI?

ANSWER: THERE ARE 79!

QUESTION: WHAT ARE THEY?

ANSWER: THERE IS A COMPUTER PRINT OUT IN NATIONAL DATA BOOK ON MISSISSIPPI WHICH I CAN PASS AROUND TO SAVE TIME.

QUESTION: IF I WANTED TO WIDEN MY GEOGRAPHIC SEARCH TO THE SOUTH HOW WOULD I GO ABOUT IT?

ANSWER: RETURN TO SOURCE BOOK PROFILES FOR A BREAKDOWN OF THE LARGEST 1000 FOUNDATIONS.

QUESTION: WHERE ARE MOST OF THE LARGE FOUNDATIONS LOCATED IN THE SOUTH?

ANSWER: ALABAMA, FLORIDA, GEORGIA AND TEXAS.

QUESTION: HAVE ANY OF THE FOUNDATIONS LOCATED IN THESE FOUR STATES CONTRIBUTED MONEY TO MISSISSIPPI?

ANSWER: MOST HAVE GEOGRAPHIC RESTRICTIONS THAT PRECLUDE GIVING IN MISSISSIPPI.

QUESTION: IS THERE ANY OTHER REFERENCE I CAN CHECK OUT TO DETERMINE WHAT FOUNDATIONS MIGHT ALLOCATE MONEY TO MISSISSIPPI?

ANSWER: CORPORATE FOUNDATION PROFILE DETAILS THE TOP 230 COMPANY SPONSORED FOUNDATIONS.

QUESTION: IS THERE A LARGE COMPANY WITH BRANCH OFFICES IN MISSISSIPPI THAT WOULD FUND A PROJECT IN MISSISSIPPI?

ANSWER: LEVI STRAUSS HAS BRANCH OFFICES IN THE SOUTH: 31% OF THEIR FUNDS WENT TO REHABILITATION AGENCIES LAST YEAR WITH GOODWILL IN OKLAHOMA RECEIVING A GRANT OF $25,000.

CONCLUSION: SUBJECT MATTER SEARCH WILL YIELD MORE POTENTIAL GRANTEES FOR MISSISSIPPI.

QUESTION: HOW DO YOU CONDUCT A SUBJECT MATTER SEARCH?

ANSWER: CONSULT THE FOLLOWING REFERENCES:

1. COMSEARCH BROAD TOPICS AREA HANDICAPPED
2. DIRECTORIES FOR THE HANDICAPPED
3. FOUNDATION DIRECTORY - INDEX OF FIELD OF INTEREST
4. FOUNDATION GRANTS INDEX
5. SOURCE BOOK PROFILES
6. ANNUAL REPORTS
7. IRS 990PF

REFERENCES:

ALL REFERENCE MATERIALS WERE GATHERED AT THE FOUNDATION CENTER'S LIBRARY IN WALPOLE, MASSACHUSETTS.

GRASSROOTS FUNDRAISING JOURNAL APRIL 1983 VOL. 2 NO. 2 1-4
COMSEARCH PRINT OUTS BUSINESS AND EMPLOYMENT
CORPORATE FOUNDATIONS PROFILE
FOUNDATION GRANTS INDEX
FOUNDATION FUNDAMENTALS 1981, 65-67, 95: 101.
NATIONAL DATA BOOK
SOURCE BOOK PROFILE
THE FOUNDATION DIRECTORY

THE FUTURE OF REHABILITATION RESEARCH IN BLINDNESS AND LOW VISION

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IN BLINDNESS AND LOW VISION

BLIND PERSONS LIKE THE REST OF HUMANITY EXPERIENCE TWO SURE EVENTS, BIRTH AND DEATH. LIKE THE SIGHTED, PERSONS WITH VISUAL IMPAIRMENTS HAVE NO CHOICE AT ALL ABOUT BIRTH AND RELATIVELY LITTLE CHOICE ABOUT THE FINAL EVENT. HOWEVER, IN THE PERIOD BETWEEN BIRTH AND DEATH, HOW A BLIND PERSON'S TIME IS SPENT CAN BE AFFECTED BY THE BLIND PERSON, THE FAMILY, THE EDUCATOR, THE REHABILITATION PROFESSIONAL, AND ANY NUMBER OF OTHER INDIVIDUALS.

CAREERS CAN BE THOUGHT OF AS THE SUM TOTAL OF THE WAYS IN WHICH A PERSON SPENDS A LIFETIME. IN EVERY NEWSPAPER, THERE IS A CASE HISTORY OF AN INDIVIDUAL'S CAREER. IT IS THE DECEASED'S OBITUARY. AN OBITUARY LISTS THE SURVIVING MEMBERS OF THE FAMILY, THE SCHOOLS ATTENDED, THE OCCUPATIONAL AND PROFESSIONAL ACTIVITIES PURSUED, AND COMMUNITY AND RELIGIOUS MEMBERSHIPS. AN OBITUARY IS A SUMMARY STATEMENT OF THE ACTIVITIES THOUGHT TO REPRESENT THE MOST IMPORTANT WAYS IN WHICH A PERSON SPENDS TIME ON EARTH (KRUMBOLTZ & HAMEL, 1982). BY CHOOSING HOW THEIR TIME IS SPENT, BLIND AND VISUALLY IMPAIRED PERSONS CAN EXERCISE SOME CONTROL OVER THEIR CAREER AND LIVES. SOME MIGHT ARGUE THAT BLIND PERSONS HAVE FEW CHOICES BECAUSE CHANCE FACTORS SUCH AS RACE, SEX, GEOGRAPHICAL LOCALE, PARENTAL SOCIOECONOMIC CLASS, AND THE INTRINSIC AND EXTRINSIC ATTRIBUTES OF BLINDNESS AND VISUAL IMPAIRMENTS SEVERELY RESTRICT OR EVEN ELIMINATE THE CHOICES AVAILABLE TO BLIND AND VISUALLY IMPAIRED PEOPLE. OTHERS MIGHT ARGUE THAT GIVEN THE POWERS THESE KINDS OF FACTORS HAVE ON THE CAREER DEVELOPMENT OF THE BLIND OR VISUALLY IMPAIRED PERSON, IT IS A WASTE OF EFFORT FOR WORK TO BE UNDERTAKEN TO ASSIST BLIND PERSONS TO HAVE MORE CHOICES ABOUT THE KINDS OF CAREER OPTIONS AVAILABLE TO THEM.

REHABILITATION RESEARCH TODAY TAKES AND IN THE FUTURE WILL TAKE A CONTRARY POSITION. REHABILITATION RESEARCH IN FACT IS BASED ON THE ASSUMPTION THAT BLIND AND VISUALLY IMPAIRED PERSONS CAN HAVE INFLUENCE OVER THEIR CAREER DEVELOPMENT. THE GOAL OF REHABILITATION RESEARCH IN THE FUTURE AS IT IS TODAY WILL BE TO PROVIDE CONSUMERS AND PRACTITIONERS SOLUTIONS TO THE PROBLEMS BLIND AND VISUALLY IMPAIRED PERSONS ENCOUNTER IN MANAGING THEIR CAREERS AND LIVES.

REHABILITATION RESEARCH IN THE FIELD OF BLINDNESS AND LOW VISION IS DESIGNED TO ASSIST PERSONS WITH VISUAL IMPAIRMENTS GAIN THE KNOWLEDGE, SKILLS AND ATTITUDES THEY NEED TO MAKE CHOICES ABOUT THE WAY THEY LIVE SO THAT THEIR LIVES ARE OF THE MOST BENEFIT AND SATISFACTION TO THEMSELVES AND TO SOCIETY. A BLIND OR VISUALLY IMPAIRED PERSON WITHOUT THE SKILLS, KNOWLEDGE, AND ATTITUDES NECESSARY TO DIRECT HIS OR HER CAREER IS AT THE MERCY OF CHANCE AND THE INTRINSIC AND EXTRINSIC ATTRIBUTES OF BLINDNESS. THIS IS A STATE ANTITHETICAL TO THE GOAL OF REHABILITATION RESEARCH. THE FUTURE OF RESEARCH IN THE REHABILITATION OF PERSONS WHO ARE BLIND OR VISUALLY IMPAIRED LIES IN HELPING BLIND AND VISUALLY IMPAIRED PERSONS GAIN MORE AND MORE CONTROL OVER THEIR CAREER PROCESSES.

IN WHAT DIRECTION SHOULD RESEARCH GO IN ASSISTING BLIND PERSONS TO ACHIEVE GREATER CAREER CONTROL? WILL IT BE DIRECTED AT DEVELOPING NEW TECHNOLOGY? NOT LIKELY, IT WILL IN GREATER PROBABILITY EXAMINE HOW TECHNOLOGY MIGHT BE USED BY CONSUMERS AND PRACTITIONERS ALIKE IN ENHANCING THE CONTROL BLIND AND VISUALLY IMPAIRED PERSONS HAVE OVER THEIR CAREERS. IT MIGHT EVALUATE AIDS AND EQUIPMENT TO PERMIT PUBLIC DISSEMINATION OF INFORMATION SUCH AS THE VALUE, COST, AND LIFE-EXPECTANCY OF DEVICES AVAILABLE FOR BLIND PERSONS (TOBIN, 1984). IT,

REHABILITATION RESEARCH IN COLLABORATION WITH THE CONSUMERS OF THIS TECHNOLOGY, MIGHT, THROUGH RESEARCH PROGRAMS, ASSIST ENGINEERS AND COMPUTER SCIENTISTS TO DESIGN TECHNOLOGICAL DEVICES WHICH MEET THE CAREER DEVELOPMENT NEEDS OF DISABLED PERSONS.

REHABILITATION RESEARCH WILL FOCUS ON HOW BLINDNESS AND OTHER VISUAL IMPAIRMENTS AFFECT THE CAREER DEVELOPMENT OF THIS POPULATION. STUDIES WILL BE CONDUCTED ON THE DELIVERY OF CAREER DEVELOPMENT SERVICES AND THE SHORT-TERM, INTERMEDIATE, AND LONG-TERM OUTCOMES OF THESE SERVICES FOR THE ENHANCEMENT OF CAREERS OF BLIND PERSONS. STUDIES WILL BE CONDUCTED USING MULTIPLE OUTCOME CRITERIA, MULTIPLE MEASURES OF THE SAME CRITERION, AND SPECIFIC AS WELL AS GLOBAL MEASURES OF THE OUTCOME OF CAREER DEVELOPMENT SERVICES. CAREER DEVELOPMENT CONSTRUCTS, CAREER GOALS, AND CAREER SERVICES FOR AND OF BLIND PERSONS WILL BE BETTER DEFINED. FOR EXAMPLE, A MAJOR CONCERN IN THE BLINDNESS FIELD AND COMMUNITY IS "WHAT KINDS OF SERVICES ASSIST THE UPWARD MOBILITY OF BLIND PERSONS?" THE FIELD HAS YET TO DEFINE UPWARD MOBILITY AND ITS PLACE IN THE DELIVERY OF CAREER SERVICES OR EVEN WHO IS RESPONSIBLE FOR THE UPWARD MOBILITY OF THE BLIND PERSON. IS IT THE AGENCY'S, THE BLIND PERSON'S, THE EMPLOYER'S, OR EVERYONE'S RESPONSIBLITY?

INDIVIDUAL CAREER SERVICES AND THEIR EFFECTS ON THE CAREER DEVELOPMENT OF BLIND PERSONS WILL CONTINUE TO RECEIVE THE ATTENTION OF THE REHABILITATION RESEARCHER. IMPROVED ASSESSMENT DEVICES AND PROCEDURES WILL BE THE AIM OF MANY REHABILITATION RESEARCH PROJECTS. ASSESSMENT INSTRUMENTATION WILL BE DEVELOPED TO ASSIST CONSUMERS AND PRACTITIONERS MAKE MORE ADEQUATE DECISIONS ABOUT CAREERS IN MANAGERIAL, TECHNICAL, AND PROFESSIONAL FIELDS AS WELL AS IN OTHER FIELDS OF EMPLOYMENT.

A FERTILE AREA FOR REHABILITATION RESEARCH IS THE DEVELOPMENT OF INSTRUMENTATION FOR MEASURING THE OUTCOMES OF THE EDUCATIONAL AND REHABILITATION PROCESSES. WAYS TO MEASURE VERY BASIC AND PRACTICAL PHENOMENA THAT MAY HELP TO PREDICT OCCUPATIONAL SUCCESS AND SATISFACTION ARE NEEDED. FOR EXAMPLE, CAN BLIND STUDENTS OR BLIND CLIENTS ARTICULATE THEIR CAREER GOALS AND STATE THE GOALS NECESSARY TO ATTAIN THEM? THE I.E.P. AND I.W.R.P. AND THE LINKAGE BETWEEN THE TWO OFFER EVERYONE IN THE BLINDNESS FIELD AN OPPORTUNITY TO ASSIST VISUALLY IMPAIRED PEOPLE TO DEVELOP THE SKILLS NEEDED TO STATE GOAL STEPS AS WELL AS MONITOR PROGRESS. UNFORTUNATELY, RESEARCH BASED STRATEGIES TO TEACH THE KNOWLEDGE, SKILLS, AND ATTITUDES NECESSARY FOR BOTH CONSUMERS AND PRACTITIONERS IN THIS PROCESS ARE LACKING.

THE RANDOLPH-SHEPPARD PROGRAM HAS PROVIDED EMPLOYMENT OPPORTUNITIES FOR BLIND PERSONS FOR ABOUT 50 YEARS. FOR SOME BLIND PERSONS, RANDOLPH-SHEPPARD PROGRAMS WILL CONTINUE TO PROVIDE VIABLE CAREER GOALS. NOT ALL PERSONS WHO WISH TO MOVE INTO THIS FIELD WILL BE SUCCESSFUL. RESEARCH QUESTIONS THAT REQUIRE STUDY INCLUDE THE FOLLOWING: ARE THERE TRAINING STRATEGIES WHICH ASSIST BLIND PERSONS TO BECOME MORE EFFECTIVE OPERATORS OR MANAGERS OF RANDOLPH-SHEPPARD PROGRAMS? WHAT ARE THE PERSONAL SKILLS, ATTITUDES, AND INTERESTS THAT CONTRIBUTE TO THE SUCCESS OR FAILURE OF A NEW RANDOLPH-SHEPPARD STAND? WHAT TYPES OF TRAINING ACTIVITIES WOULD BE USEFUL IN HELPING PEOPLE DECIDE WHETHER OR NOT THE RANDOLPH-SHEPPARD PROGRAM IS AN APPROPRIATE CAREER CHOICE? WHAT TYPES OF ASSESSMENT INSTRUMENTS WOULD BE HELPFUL IN IDENTIFYING SUCCESSFUL OPERATORS? IF RESEARCH CAN ASSIST IN IDENTIFYING THE DEFICITS OF AN INDIVIDUAL LIKELY TO FAIL, WHICH OF THE DEFICIT AREAS ARE AMENABLE TO TRAINING DESIGNED TO OVERCOME THE DEFI-

CIT? THESE KINDS OF QUESTIONS CAN CONTINUE FOR THESE ARE IMPORTANT TO ONE CAREER OBJECTIVE FOR SOME BLIND PERSONS. A SIMILAR SERIES OF QUESTIONS CAN BE ASKED ABOUT PERSONS INTERESTED IN BECOMING SELF-EMPLOYED, ENTREPRENEURS, OR ENGAGING IN HOME-BASED EMPLOYMENT.

FOR SOME BLIND PERSONS, LIKE SOME SIGHTED PERSONS, PERSONAL SATISFACTION MAY NOT BE REACHED THROUGH WORK, NO MATTER HOW DESIRABLE THAT IS. OCCUPATIONAL ACTIVITIES ARE ONLY ONE WAY OF SATISFYING PERSONAL NEEDS. IT IS APPROPRIATE NOW TO RECALL DON SUPER'S DEFINITION OF CAREER.

> ...THE SEQUENCE OF MAJOR POSITIONS OCCUPIED BY A PERSON THROUGHOUT HIS PREOCCUPATIONAL, OCCUPATIONAL, AND POST OCCUPATIONAL LIFE; INCLUDES WORK-RELATED ROLES SUCH AS THOSE OF STUENT, EMPLOYEE, AND PENSIONER, TOGETHER WITH COMPLEMENTARY AVOCATIONAL, FAMILIAL AND CIVIC ROLES (1979, P. 156).

EDUCATIONAL AND REHABILITATION PERSONNEL, IN THEIR EFFORTS TO HELP BLIND PEOPLE FIND A CAREER THAT SATISFIES ALL THEIR INTERESTS, VALUES AND TALENTS, MAY FIND IT DIFFICULT TO HELP THEM ACHIEVE REALISTIC GOALS IF CAREER IS TOO NARROWLY DEFINED. THE TASK OF REHABILITATION RESEARCH IS TO PROVIDE PRACTITIONERS WITH METHODS WHICH ASSIST BLIND PERSONS IN PLANNING CAREERS IN THE FULLEST SENSE OF THE WORD. SUCH CAREERS WILL BE SATISFYING AND CONTRIBUTE TO THE KIND OF QUALITY OF LIFE DESIRED BY THE BLIND PERSON. DIRECTIONS RESEARCHERS MIGHT PURSUE TO REACH THIS GOAL INCLUDE THE DEVELOPMENT OF WAYS TO ASSESS HOW SPECIFIC ACTIVITIES LIKE FAMILY, CIVIC, AND HOBBIES MIGHT SATISFY AN INDIVIDUAL'S NEEDS NOT MET BY WORK ACTIVITIES (KRUMBOLTZ & HAMEL, 1982). THE PATTERNS BLIND PEOPLE USE TO BLEND THE NON-OCCUPATIONAL AND THE OCCUPATIONAL TO ACHIEVE THE QUALITY OF LIFE THEY DESIRE MAY ALSO BE A RESEARCH QUESTION.

THE CHALLENGES FACING REHABILITATION RESEARCH IN ITS EFFORTS TO ENHANCE THE CAREER DEVELOPMENT OF BLIND PERSONS ARE NUMEROUS AND EXCITING. IT MUST BE ACKNOWLEDGED THAT THESE CHALLENGES ARE BEING PRESENTED IN THE CONTEXT OF THE CULTURE OF THIS NATION AND IN THE FIELD OF BLINDNESS IN PARTICULAR. THE PERCEIVED NEED OF THE FIELD FOR REHABILITATION RESEARCH IN BLINDNESS HAS DIRECT INFLUENCE ON THE ANNUAL BUDGET APPROPRIATED BY CONGRESS FOR THESE ACTIVITIES. THE QUALITY AND QUANTITY OF REHABILITATION RESEARCH WILL BE ONLY AS GREAT AS THE PERCEIVED NEED FOR THE EFFORTS. IF SUPPORT OF THE FIELD IS NOT GIVEN TO RESEARCH IN THIS AREA, IT SHOULD BE EVIDENT THAT THE QUALITY OF ANY ONE BLIND PERSON'S CAREER DEVELOPMENT WILL BE ONLY AS HIGH AS THAT OF THE TOOLS, CURRICULUM MATERIALS, AND REHABILITATION STRATEGIES PROVIDED TO PRACTITIONERS AND CONSUMERS FROM REHABILITATION RESEARCH. REHABILITATION RESEARCH, JUST NOW IN ITS INFANCY, NEEDS YOUR SUPPORT, INVOLVEMENT, AND COOPERATION. THE FUTURE OF REHABILITATION RESEARCH LIES IN THE DEGREE TO WHICH CONSUMERS, PRACTITIONERS, AND RESEARCHERS COOPERATE AND CONSOLIDATE THEIR EFFORTS AND RESOURCES IN DEVELOPING RESEARCH AND TRAINING PRODUCTS WHICH ENHANCE THE CAREER DEVELOPMENT OF BLIND AND VISUALLY IMPAIRED PERSONS.

THERE, THEN, IS MY ANALYSIS OF RESEARCH NEEDS IN THE FIELD OF BLINDNESS. IT IS OFFERED FOR ANALYSIS AND CRITICISM. "IN SELF-PROTECTION, I WOULD SAY THAT TRYING TO PROVIDE SERVICES WITHOUT CARRYING OUT RESEARCH IS LIKE USING A BLUNT, SINGLE PRONGED FORK - IT IS OF LITTLE VALUE FOR STABBING THE FOOD AND OF EVEN LESS VALUE FOR LIFTING IT TO THE MOUTH. IF THE ENDS ARE WILLED, THEN THE MEANS ALSO MUST BE WILLED. IT IS NOT, PERHAPS, THE TIME TO GO INTO THE QUALIFICATIONS, RECRUITMENT, TRAINING, AND CAREER STRUCTURE OF THE RESEARCH

STAFF NEEDED TO CARRY OUT SUCH A PROGRAM. WITHOUT SUCH A CADRE OF PEOPLE, HOWEVER, WE SHALL FIND OURSELVES IN THE YEAR 2000 BEMOANING THE DEARTH OF ESSENTIAL INFORMATION, AND WE SHALL BE DOING A GRAVE DISSERVICE TO THIS AND FUTURE GENERATIONS OF BLIND AND PARTIALLY SIGHTED PEOPLE" (TOBIN, 1984, P.4).

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